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GEORGIA BUSINESS AND ECONOMIC CONDITIONS

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Part 2

Employment and Growth in Georgia's Health Care Industry

Libby V. Morris

The Bureau of Labor Statistics projects that the nation's labor force is expected to expand to 139 million persons in the year 2000, up by 21 million, reflecting an 18 percent growth over the fourteen years since 1986. One of the leaders in this growth will be the nation's health care industry which will expand in all of its subsectors. Demand for health care understandably will be strong as a result of the aging of the population and the dramatic advances in medical technology.

Nationally, 1.4 million new jobs will be added in establishments classified as offices of health practitioners, yielding an annual growth rate of 4.4 percent per year. Nursing home and personal care facilities such as extended care facilities, convalescent homes, and hospices will add approximately 850,000 jobs for an annual growth rate of 3 percent through 2000. The population aged 85 and over (a major portion of the clientele in this sector) will rise from 2.7 million in 1985 (1.1 percent of the population) to 4.9 million in 2000 (1.8 percent), greatly affecting the demand for individual health care services. The long-term care sector also will grow in response to the decreased availability of extended hospital care due to cost-containment strategies.

GROWTH PROJECTIONS BY SECTOR

Hospital employment will continue to grow, though more slowly, due to an aging population and the increasing intensity and complexity of care provided in this setting. Hospitals will add 500,000 employees over the next twelve years. The most dramatic changes in health care during the next decade will occur in out-patient services. Group health associations, health maintenance organizations, substance abuse centers, family planning clinics, home health agencies, and freestanding diagnostic and surgical centers all fall under this umbrella. This sector will add almost 900,000 jobs and expand by 4.6 percent annually. Out-patient employment ranks as the second fastest growing industry in the economy; however, it is still a relatively small industry employing only 600,000 employees in 1986.

When examined by occupation over the fourteen-year period from 1986 to 2000, one in every nine new jobs will be health related; and of the projected 20 fastest growing occupations, twelve are health careers. The growth, however, primarily will exist in health occupations requiring the most education, leaving the undertrained and poorly educated increasingly unable to participate in this particular industry. Growth in the health diagnosing and treatment professions (e.g., physicians, dentists, pharmacists, therapists, RNs) will add 1.1 million workers, and as a category will grow 42 percent. Numerically, the greatest growth will occur in registered nursing. Over 600,000 additional RN positions will open, bringing the total workforce to 2 million nurses. The largest percentage growth will occur in physical therapy, where 57,000 new positions will yield an 87 percent growth. Pharmacy positions will expand by 24 percent, or 36,000 jobs, while physician and surgeon employment will increase by 188,000 or 38 percent.

Employment of health technicians (e.g., dental hygienists, medical technicians, radiologic technicians, LPNs) will increase by 41 percent, adding over 600,000 new jobs. The educational preparation for technicians generally consists of at least one year of post-secondary training, with associ-

ate degree programs being common. LPNs will show the largest numerical increase (238,000 jobs) with much of this growth occurring in the nursing home sector. Radiologic technicians will show the second largest increase with almost 75,000 jobs, a 65 percent growth rate. About 30,000 more jobs will be available for medical record technicians while employment for laboratory workers will increase by 57,000.

In the health service occupations category, the positions projecting growth generally require at least some post-secondary education. Overall, the health service occupations such as dental and medical assistants and nursing aides will grow by 40 percent over the next twelve years and will add 730,000 jobs to the economy. Trained medical assistants for employment in offices will grow by 90 percent (119,000 jobs), and home health aides will increase by 80 percent (111,000 workers). An additional 433,000 nursing aide and orderly jobs will open, but employment in this category in hospitals will decline by 62,000 as aides are discharged due to their inability to provide medical services in the more complex health care setting. No health occupation in fast decline appeared on the BLS list of occupations. Further, the BLS predicts that over the next twelve years as many as 200,000 new management jobs will open in the health care sector, giving many business school programs an incentive to add health care specialties.

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HEALTH CARE GROWTH IN GEORGIA

Mirroring the national trend, Georgia's health care administrators were optimistic in their projections of future growth and employment. Between 1986 and 1995, Georgia hospital CEOs project the addition of over 3,400 FTE positions (across 116 hospitals) in the 25 surveyed occupations. This amount of growth would move the current employment in the surveyed categories from 22,477 FTE to 25,881 FTE in 1995, a growth rate of 15 percent over the nine-year period, or 1.7 percent annually.

Tables 1 through 3 show the percentage increase in employment by occupation as projected by the respondents in each surveyed sector. It should be remembered, however, that employment growth in each occupation also will occur in many private practice settings. Numerically, the largest amount of growth is projected for registered nurses, with a 2,000 FTE increase projected by 1995 across 116 hospitals. The only decline in employment was noted for LPNs in the hospital and home health care sectors. Several occupations in hospitals were projected to have increases of more than 100 FTE (e.g., physical therapy, pharmacy, medical technology, and radiology). Some of the largest percentage growth will occur in occupational and physical therapy, and speech language pathology, just as projected nationwide. Even with lower numbers of patients and fewer admissions, the administrators collectively felt that increasingly heavier care, combined with larger numbers of elderly patients, sophisticated technology, and additional hospital out-patient services will escalate the need for hospital employees; therefore, in Georgia as well as nationwide, hospital employment is predicted to rise.

It is important to remember that in Tables 1 and 2, the FTE numbers reflect 55 percent of the hospitals statewide and approximately 50 percent of the nursing homes. If the data were extrapolated to account for the nonrespondents, the FTE numerical growth would be even larger. Because the amount of growth projected by Georgia hospitals correlates with the national projections, it may be difficult to understand why the numbers are so high in light of decreased occupancy rates, fewer admissions, and shortened hospital stays. These projected increases, however, reflect an industry in which the labor force is increasingly specialized, the work is labor-intensive, and the patients are older, sicker, and require higher levels of diagnostic and therapeutic care.

Georgia's nursing homes, like nursing homes nationwide, project an increase in employment into the 1990s. In 1986, the 163 nursing home respondents employed almost 9,600 FTE employees in twenty selected occupations. By 1995, the respondents project the addition of over 2,000 FTE in the surveyed occupations, resulting in a growth rate of 2.4 percent annually, or 22 percent overall. As Table 2 shows, the largest numerical increases will be in nursing home aides (accounting for slightly over one-half of the

Table 1

Projected Growth in Hospitals
Selected Occupations

Occupational Category	1986* Total FTE	1995 FTE	1986-1995 % Increase
RN	11,591	13,405	16
Nurse Practitioner	44	84	91
LPN	4,688	4,679	0
Occupational Therapist	158	215	36
Occupational Therapist Assistant	30	76	153
Physical Therapist	299	439	47
Physical Therapist Assistant	124	210	69
Pharmacist	595	752	26
Respiratory Therapist	427	535	25
Respiratory Therapy Technician	387	465	20
Medical Laboratory Technician	522	660	26
Medical Technologist	1,150	1,285	12
Dietitian	216	269	25
Radiographer	735	843	15
Radiation Therapy Technologist	167	216	29
Diagnostic Medical Sonographer	71	103	45
Nuclear Medicine Technologist	111	166	50
Speech Pathologist	56	97	73
Medical Record Administrator	123	153	24
Medical Record Technician	222	304	37
Assistant Administrator	229	289	26

* All FTE have been rounded to the nearest whole number.

growth). Other large increases are projected for registered nurses, practical nurses, physical therapists and assistants.

At least two factors influence the projected growth in nursing home employment: the projected number of beds in 1990 and 1995 and the level of care provided. Overall, the nursing home respondents expect to add 1,941 beds by 1995 and expect to tend to residents who require heavier care. In Georgia, the elderly are growing at a rate twice that of the general population; coupled with longer life expectancies, this drives up the need for long-term health care. In 1986, the American Health Care Association, which represents for-profit nursing homes, estimated that a 220 bed nursing home must open every day until 2000 to meet the national demand. Obviously, the ability of Georgia's nursing home sector to meet the demands of the future will be highly dependent upon attracting health care professionals.

The 27 home health agencies responding to the survey employed over 700 full-time and over 500 part-time employees, yielding a 1986 FTE of 1,007 in 13 surveyed occupations. The 1995 FTE employment in this sector is projected to increase to 1,542, up 53 percent over the nine-year period, or 5.9 percent per year. In Georgia, as nationally, the out-patient market is projected to grow most rapidly. As Table 2 reflects, the largest numerical increases are projected for RNs, home health aides, and physical therapists. Currently, LPNs cannot perform nursing tasks unsupervised in this setting; therefore, this category is projected to decline. Home health administrators also projected enlarging employment to include categories not previously covered, such as dietetics and respiratory therapy.

FACTORS AFFECTING THE INDUSTRY

Although the predictions for rapid growth in the health care industry are optimistic for both Georgia and the nation, several important factors have influenced this trend, and several factors have the potential for upsetting the balance between supply and demand in health care in the future. Important factors to watch include population growth and shifts, economic, legislative, and health care plan changes, and educational trends.

As already mentioned, one of the most significant

Continued on page 10

Eleventh in a
continuing series

Regional Economic Conditions

Hugh O. Nourse and John Drye

The Southeast Region

The Southeast region includes the counties of Brantley, Charlton, Clinch, Pierce, and Ware. As its name implies, the region is located in the southeast corner of Georgia, and encompasses the cities of Homerville, Waycross, Blackshear, Nahunta, and Folkston. The Okefenokee National Wildlife Refuge and Wilderness area is centered here as well.

The region's major industrial employers are the lumber, food, apparel, printing and publishing, and non-electrical machinery industries (Table 1). Of these five, only the food and apparel industries experienced a low growth in statewide employment.

The civilian labor force unemployment rate for the Southeast region averaged 8.7 percent in 1988 as compared to 5.5 percent for the state as a whole (Table 2). The unemployment rate for this region ranged from a low of 6.8 percent in 1981 to a high of 10.5 percent in 1983. The area's labor force grew at an annual rate of .32 percent between 1981 and 1987, which is below the same growth rate experienced throughout the state for this period. The educational level of this region's labor force is relatively low, as only 43.9 percent of its labor force are high school educated.

Table 1

Southeast Region
Number of Manufacturing Plants by Employment, 1982

	Number of Employees				Plants
Industry	1-19	20-99	100-249	Over 250	Total
Food & kindred products	4	4	0	0	8
Tobacco manufactures	0	0	1	0	1
Textile mill products	0	0	1	0	1
Apparel & other textile products	5	10	3	0	18
Lumber & wood products	95	8	5	1	109
Furniture & fixtures	0	0	0	0	0
Paper & allied products	0	2	0	0	2
Printing & publishing	13	1	0	0	14
Chemicals & allied products	4	1	0	0	5
Petroleum & coal products	0	0	0	0	0
Rubber & misc. plastics products	0	0	1	0	1
Leather & leather products	0	2	1	0	3
Stone, clay, and glass products	3	2	0	0	5
Primary metal industries	0	0	0	0	0
Fabricated metal products	1	0	0	1	2
Machinery, except electrical	10	0	0	0	10
Electric & electronic equipment	0	0	0	0	0
Transportation equipment	0	2	0	0	2
Instruments and related products	0	0	0	0	0
Misc. manufacturing industries	0	0	0	0	0
Total number of plants	135	32	12	2	181

Source: U.S. Department of Commerce, *Census of Manufacturing*, 1982

Approximately 56.4 percent of Georgia's entire labor force have at least a high school education.

The region forms part of the Waycross and Jacksonville, Florida retail trade areas. Retail sales in the area are dominated by the city of Waycross which has the only large shopping mall.

Total residential construction ranged from a low of 98 units in 1987 to a peak of 237 units in 1984 (Table 3). This relatively high level of residential construction was maintained during 1985, but dropped precipitously in 1986 and 1987.

Table 2

Civilian Labor Force
Southeast Region

Year	Employed	Unemployed	Total
1980	27,223	2,194	29,417
1981	27,222	1,997	29,219
1982	27,915	3,264	31,179
1983	27,564	3,236	30,800
1984	28,275	2,414	30,689
1985	29,164	3,065	32,229
1986	29,897	2,932	32,829
1987	27,552	2,629	30,181

Source: Georgia Dept. of Labor, Labor Information System.

Nonresidential construction in the Southeast region did not exhibit any trend between 1980 and 1987. Industrial construction was at extremely low levels during that period, ranging from a low $55 thousand in 1981 to highs of $857 thousand in 1983 and $1.1 million in 1987. Random variations seem to account for these changes in the level of industrial construction. The average annual expenditures on this type of construction were only $466,919.

Office, bank, and professional buildings construction also was very low. Office construction ranged from $107 thousand in 1984 to $3.4 million in 1987. Again, there was no discernable trend in these data for the period since the average annual expenditure on office construction was only $1 million.

Retail store construction was very low between 1980 and 1983, but rebounded in 1984 to $1.4 million. The following year, it nearly quadrupled to $5 million, then tailed off to only $703 thousand in 1986. The average annual expenditures on retail store construction from 1980 to 1987 was only $1.3 million.

Although there has been some growth in employment in this region, high unemployment and fluctuations in total employment leave the region about where it was in 1980. Average construction levels also have fluctuated around low annual averages. This region and the Georgia portion of Chattanooga are the slowest growing of the sixteen regions we have studied.

Table 3

Building Permits
Southeast Region

	Residential		Value of Construction		
Year	Single Units	Total Units	Industrial	Office	Retail
1980	105	179	$ 500,000	$ 896,656	$ 471,626
1981	64	166	55,000	1,162,018	711,400
1982	54	110	186,000	625,000	595,000
1983	90	98	857,500	898,912	230,000
1984	86	237	687,813	107,000	1,350,400
1985	187	219	329,040	1,100,500	4,996,420
1986	99	99	0	60,000	703,000
1987	92	94	1,120,000	3,358,780	1,556,566
Annual Average	97	150	466,919	1,026,108	1,326,802

Source: U.S. Dept. of Commerce, Bureau of the Census.

An Analysis of Employment Growth in the Central Savannah River APDC

Pedro Villegas, Jr. and Kevin T. McNamara

Economic development continues to hold the attention of leaders throughout Georgia. The persisting crisis in agriculture and the increasing importance of national and international events on local economic conditions raises several questions for county residents and local government and planning commission staff who are involved in economic development activities. What is the appropriate development strategy? Can we compete with other communities and/or foreign labor in economic development endeavors? A first step in answering these questions is understanding the local economy, its strengths and weaknesses. Economic development planners need to know whether industries in their community are growing or declining. They also need to know if their community has a comparative advantage in any industry.

A local economy includes firms from a variety of industrial sectors. Growth or decline in these sectors affects the growth of the overall economy. The causes of growth and decline are complex. Technological innovation, changes in capital and/or labor productivity, location factors, input cost shifts, and changes in product demand are some of the factors that influence industrial expansion.

Shift-share analysis has been developed as a framework for examining changes in a local economy. It describes changes in a local economy and helps decision-makers to better understand and evaluate local development strategies.

SHIFT-SHARE ANALYSIS

Shift-share analysis is a descriptive tool for examining differences in growth rates among counties or regions over a specified time period. Employment or income are the variables most commonly used as growth measures. The analysis reported here is based on employment data obtained from the Bureau of Economic Analysis.

Shift-share analysis divides each sector of a local economy into three components: national growth, industry mix, and competitive share. Each of these components will be computed using the sample data presented in Table 1. The national growth component measures growth that would occur if a particular sector in a local economy grew at the same rate as the overall national economy.

The national growth component is computed by multiplying the national growth rate by the base year employment in the local economy. The national growth rate is the percentage change in the total national economy. The base year is the first year of the specified time period. Using the sample data, the national growth components for sectors 1 and 2 are:

Table 1

Sample Data

	Year 1	Year 2	Change	% Change
Total National Employment	8,000	8,800	800	10
National Sector 1	2,000	2,400	400	20
National Sector 2	1,000	1,050	50	5
Local Employment				
Local Sector 1	200	210	10	5
Local Sector 2	400	440	40	10

Sector 1 .10 x 200 = 20 employees
Sector 2 .10 x 400 = 40 employees

This indicates that sectors 1 and 2 would have grown by 20 and 40 employees, respectively, if they had grown at the same rate as the national economy.

The industry mix component identifies the degree to which a local economic sector is characterized by rapid growth (a growth rate greater than the overall national growth rate) or slow growth (a growth rate lower than the overall national growth rate). This component is computed by multiplying base year employment in a particular local sector by the difference between the national growth rate for that sector and the overall national growth rate. Using the sample data, the sectors 1 and 2 industry components are:

Sector 1 = 200 x (.20 - .10) = 20 employees
Sector 2 = 400 x (.05 - .10) = -20 employees

The positive 20 employees for sector 1 indicates that it is growing more rapidly than the overall national economy, and the negative 20 employees for sector 2 indicates a slow growth sector.

The competitive share component measures how a particular sector is growing compared to growth of that same sector in other regions. Competitive share is calculated by multiplying sectoral employment in the base year by the difference between the local sector growth rate and the national sector growth rate. For example:

Sector 1 = 200 x (.05 - .20) = -30 employees
Sector 2 = 400 x (.10 - .05) = 20 employees

The negative sign for the sector indicates that the community is losing its industry share as employment declines relative to national sector change. The positive sign for sector 2 indicates that the sector is growing faster locally than it is nationally. The region, therefore, is increasing its share of employment in the sector.

A cautionary note: although shift-share analysis is useful for identifying changes in a local economy, it is merely descriptive and does not provide insight into why changes in a local economy have occurred. Structural changes that take place in the local economy over the time period used in the analysis are not captured or described by the technique.

RESULTS FOR THE CENTRAL SAVANNAH RIVER APDC

Employment data for the 13 counties in the Central Savannah River Area Planning and Development Commission (APDC) were combined for analysis. The counties include Burke, Columbia, Emanuel, Glascock, Jefferson, Jenkins, Lincoln, McDuffie, Richmond, Screven, Taliaferro, Warren, and Wilkes. The city of Augusta is the region's hub. Tables 2 and 3 present the results of the local/U.S. and local/Georgia shift-share analyses, respectively, and covers employment changes for eight major sectors. The national growth component, industrial mix component, competitive share component, and actual employment changes are presented in each table. The data used in the analyses are shown in Table 4.

Table 2

Central Savannah River APDC and United States Analysis 1980-1985

Sector	National Growth Component	Industry Mix Component	Competitive Share Component	Actual Employment Change*
Agriculture, forestry, and fisheries	26	77	-247	-144
Construction	425	-418	322	329
Manufacturing	2,594	-5,231	3,379	741
Transportation and public utilities	319	-160	162	321
Wholesale trade	410	-7	-28	375
Retail trade	1,572	791	2,546	4,910
Finance, insurance, and real estate	370	267	-141	495
Services	1,079	2,336	2,930	6,344

* Sum of components may not equal actual employment change due to rounding.

Table 3

Central Savannah River APDC and Georgia Analysis 1980-1985

Sector	National Growth Component	Industry Mix Component	Competitive Share Component	Actual Employment Change*
Agriculture, forestry, and fisheries	68	127	-339	-144
Construction	1,106	414	-1,191	329
Manufacturing	6,750	-5,235	-774	741
Transportation and public utilities	830	-166	-344	321
Wholesale trade	1,066	-215	-476	375
Retail trade	4,092	1,747	-930	4,910
Finance, insurance, and real estate	962	-71	-397	495
Services	2,807	2,442	1,095	6,344

* Sum of components may not equal actual employment change due to rounding.

A review of the shift-share results in Table 2 indicates that the APDC is growing relatively strongly. The area grew 16 percent, double that of the national employment growth. Four of the sectors in the analysis are rapid-growth and four are slow-growth. The competitive share component, however, reveals that three of the slow-growth sectors (construction, manufacturing, and transportation) have positive competitive share components. Manufacturing, the only sector that experienced a decline in total employment nationally, is the largest employment sector in the local economy. This sector had a strong competitive share component. Does this suggest that the region has a cost or other advantage for manufacturing? On the other hand, does this suggest that the local manufacturing sector will face future downturns in employment as the regional economy is affected by national trends?

Two of the rapid-growth sectors — retail trade and services — had positive competitive share components. On the basis of both percentage change and absolute change, these sectors were the strongest locally, experiencing 25 and 47 percent growth, respectively. These changes accounted for 37 and 47 percent of total employment change from 1980 through 1985. The two other rapid-growth sectors — agriculture, forestry, and fisheries; and finance, insurance, and real estate — had negative competitive share components. The agriculture sector was the only one that experienced an actual employment decline over the 1980-1985 period. The 44 percent decline was equivalent to about 1 percent of the total local employment growth.

The comparison of regional and state data in Table 3 indicates that the Central Savannah River APDC lags behind the state in employment growth. While employment in the APDC area grew 16 percent from 1980 through 1985, state employment grew 21 percent. Agriculture, forestry, and fisheries; retail trade; and services were rapid-growth sectors in both the state and national analyses. Construction also was a rapid-growth industry at the state level.

The competitive share components in the state analysis indicate that the service sector is the only one in which the APDC's counties are increasing their employment share relative to growth in that sector at the state level. The employment share in each of the other sectors is declining for the 13-county area.

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Table 4

Data Used for APDC, United States, and Georgia Analysis

Sector	APDC Total 1980	APDC Total 1985	Employment Change	Percentage Change
Total employment (eight sectors)	85,051	98,422	13,371	16
Agriculture, forestry, and fisheries	325	181	-144	-44
Construction	5,319	5,648	329	6
Manufacturing	32,469	33,210	741	2
Transportation and public utilities	3,993	4,314	321	8
Wholesale trade	5,128	5,503	375	7
Retail trade	19,685	24,595	4,910	25
Finance, insurance, and real estate	4,629	5,124	495	11
Services	13,503	19,847	6,344	47

Sector	U.S. Total 1980	U.S. Total 1985	Employment Change	Percentage Change
Total employment (eight sectors)	73,280,926	79,134,701	5,853,775	8
Agriculture, forestry, and fisheries	289,843	381,632	91,789	32
Construction	4,473,551	4,479,533	5,982	0
Manufacturing	21,151,842	19,433,606	-1,718,236	-8
Transportation and public utilities	4,631,152	4,815,535	184,383	4
Wholesale trade	5,215,520	5,625,007	409,487	8
Retail trade	15,045,287	16,851,827	1,806,540	12
Finance, insurance, and real estate	5,278,404	6,004,136	725,732	14
Services	17,195,327	21,543,425	4,348,098	25

Sector	Georgia Total 1980	Georgia Total 1985	Employment Change	Percentage Change
Total employment (eight sectors)	1,697,331	2,050,205	352,874	21
Agriculture, forestry, and fisheries	6,739	10,776	4,037	60
Construction	105,655	135,850	30,195	29
Manufacturing	535,625	560,624	24,999	5
Transportation and public utilities	128,748	150,174	21,426	17
Wholesale trade	144,374	168,346	23,972	17
Retail trade	341,213	442,438	101,225	30
Finance, insurance, and real estate	112,533	134,214	21,681	19
Services	322,444	447,783	125,339	39

Source: U.S. Department of Commerce, Bureau of the Census, *County Business Patterns*, 1980 and 1985.

Table 2

Projected Growth in Nursing Homes
Selected Occupations

Occupational Category	1986* Total FTE	1995 FTE	1986-1995 % Increase
RN	679	939	38
LPN	1,901	2,224	17
Nursing Aide	6,273	7,488	19
Occupational Therapist	37	48	30
Occupational Therapist Assistant	26	40	54
Physical Therapist	68	115	69
Physical Therapist Assistant	127	194	53
Pharmacist	49	63	29
Medical Laboratory Technician	9	22	144
Medical Technologist	3	7	133
Dietitian	71	98	38
Speech Pathologist	39	48	37
Medical Record Administrator	17	29	71
Medical Record Technician	59	81	37
Assistant Administrator	52	87	67

* All FTE have been rounded to the nearest whole number.

Table 3

Projected Growth in Home Health Agencies
Selected Occupations

Occupational Category	1986* Total FTE	1995 FTE	1986-1995 % Increase
RN	398	608	53
Nurse Practitioner	2	17	750
LPN	71	58	-18
Home Health Aide	383	591	54
Occupational Therapist	15	34	127
Occupational Therapist Assistant	1	1	—
Physical Therapist	62	99	60
Physical Therapist Assistant	6	13	117
Speech Pathologist	17	29	71
Medical Record Administrator & Technician	4	13	225
Assistant Administrator	19	39	105
Dietitian	0	2	—
Respiratory Therapist & Technician	0	7	—

* All FTE have been rounded to the nearest whole number.

Health Care Industry
Continued from page 3

changes affecting the demand for health professionals and health care service is Georgia's rapid growth in population. Currently the 11th most populous state, an estimated 8 million people will reside in Georgia in the year 2000, up from 5.4 million in 1980. Between 1980 and 1986, the U.S. population increased by 5.3 percent while Georgia grew by 11.7 percent; this growth ranked second, only behind Florida, in the Southeast. All areas of Georgia did not increase in population during this time: 37 counties lost population. Population losses affect not only the provision of services but often the ability to attract new health care professionals, leaving a greater burden to the local health departments and remaining health care providers.

The "graying of America" is a well documented shift in American society; however, the implications and demands this phenomenon holds for health care services are still unfolding. In 1980, America's older adults numbered over 25 million (11 percent of the U.S. population) and accounted for 31 percent of personal health care expenditures. By 1985, those 65 and older had grown to 28.5 million. By the year 2000, those 65 and over will number 34.9 million and those over 85 will number almost 5 million. Georgia's elderly population is projected to be almost 800,000 or 11.8 percent of the population by 2000. As Georgia's and the nation's elderly increase in number, health care utilization will continue to rise dramatically. Although final stage illness consumes a large amount of dollars in a very short time, neither the public nor the federal government tends to view the rationing of health care at any level as an acceptable response to controlling costs. In fact, the Congress is putting the final touches on catastrophic health insurance coverage, the most extensive health program change since Medicare.

Health care utilization, availability, and accessibility are affected by legislation and by the economy. Historically, personnel and services are concentrated in the most populous, affluent areas. As Georgia's economy has improved, so has its care system. Posing a major threat to the nation's health care industry in the next decade, however, is the growing shortage of health care professionals. The decline in the number of students studying in the health fields will leave many positions without trained professionals.

Georgia's rapid growth in population coupled with the state's historic undersupply of professionals has resulted in vacancies in many fields. Since this survey was taken in 1986, vacancy rates in many of the smaller occupations have intensified. For example, three employment agencies have opened in the last year exclusively to provide temporary medical laboratory workers; yet the vacancy rate for medical technology was only moderate at the time the survey was taken.

The facts are clear: fewer students are of college age and competition for them both between colleges and within colleges is stiff. Moreover, fewer students choose to major in the health fields, especially allied health. For several years, college programs in Georgia and across the nation have not graduated a sufficient number of students in nursing, physical therapy, occupational therapy, and speech-language pathology, for instance, to meet the demand. In many cases, it is not the lack of programs, but rather a lack of students to enter the programs. In Georgia, the number of graduates in occupational therapy and physical therapy has not increased in a decade, while the population has grown and the employment opportunities have increased. Enrollment declines in some fields have brought about the demise of certain health professions programs. In medical technology, the number of programs dropped from about 715 to just over 500 nationally in less than ten years. Similarly, the only medical records technician program in Georgia recently closed due to a lack of students, despite projections that growth in this field in Georgia would approach 35 percent by 1995.

The current undersupply of professionals in health care probably will continue into the 1990s based upon projected graduations in several fields. For example, in 1984, 80,312 students were graduated from nursing programs; that number is projected to decline to just over 66,000 in 2000. About 7,700 students were graduated in pharmacy in 1978; in 2000, just over 5,000 are projected. Dentistry graduations will decline by 1,000 in the same period. Many of the smaller, less well-known fields will drop even more.

If the shortages are to be reversed and if professionals are to be available for the phenomenal growth predicted in health care in the 1990s, steps must be taken now. According to a recent survey, this will be difficult. The 1987 Cooperative Institutional Research Program's survey of college freshmen suggests that the supply of future personnel for certain technology and health care sectors will decline in the next decade. Based upon the survey of freshmen, women's interest in nursing as a career has fallen by more than half since 1974. Interest in all medical careers among freshmen dropped to 3.5 percent in 1987. Business administration continued to attract the most students with almost 25 percent preferring a business career. Further, 75 percent of the students surveyed reported that "being very well off financially" was a very important life goal. Many of the allied health fields (excluding the major professions) will not meet this criterion.

Since Georgia's college participation rate is one of the lowest in the nation, ranking 43rd in a recent survey, the state could offset potential and real declines in college participation by recruiting more high school graduates, and by actively recruiting more of them into the health fields. The state's future health care industry will depend, at least in part, on the ability to do so now.

Libby V. Morris is an assistant professor in the Institute of Higher Education at The University of Georgia, and the principal author of the study "Health Professions Personnel in Georgia."

Recent Real Estate Developments

Lina Echeverri

Georgia's softening economic activity is reflected directly in all categories of residential construction and home sales. Overall, a total of 48,958 housing permits authorized have been issued during the first nine months of 1988. Cumulative figures show that the total number of permits dropped 5.5 percent compared to the same period in 1987.

The metropolitan areas account for 80.7 percent of the total number of permits issued in Georgia. With a total of 33,472 permits authorized during the first three quarters of 1988, Atlanta continues to be the largest housing market in the state. This corresponds to 68.4 percent of the total number of permits issued in Georgia during the same period. The rest of the MSAs contributed 12.3 percent of the total number of housing permits authorized. Macon-Warner Robins had 2.7 percent of the permits, Savannah issued 2.5 percent, Athens and the Georgia portion of the Augusta MSA issued 2.3 percent each, the Georgia counties of the Columbus MSA issued 1.3 percent, and Albany authorized .4 percent of the total.

Table 1 reports quarterly data on total housing permits for the metropolitan areas and for the state. The percentage changes indicate mixed performance during 1987 and the first three quarters of 1988. The number of permits issued declined each quarter of 1987, resulting in an annual drop of 14.5 percent below the annual figure for 1986. The first quarter of 1988 showed a slight recovery, but the second and third quarters were off by 2.5 and 14.2 percent, respectively.

On another level, counties in the Atlanta MSA authorized the most housing permits during the first three quarters of 1988. Fulton County issued a total of 6,627 housing permits, which ranks this county as first in the state. It was followed by DeKalb, which issued 5,370 permits, and by Gwinnett and Cobb, which issued 4,811 and 4,530 permits, respectively. The market for single-family housing authorized by permit was distributed differently. Gwinnett County issued the largest number of single-family housing permits in the state with a total of 3,851. It was followed by Cobb and Fulton counties, which issued 3,637 and 3,127 of these permits, respectively.

Table 2 shows the value of total private housing units authorized in the state and in the MSAs. These figures do not give the value per square foot, which is the correct indicator of prices in the housing market. In addition, the percentage changes reported are not adjusted for inflation, although they provide an insight to the different market trends and complement the figures shown in Table 1.

Another indicator of housing market performance in Georgia is the figures reported by the National Association of Realtors which are given in Table 3. Quarterly figures correspond to seasonally adjusted annual rates on sales. The values for 1987 were relatively volatile, resulting in an annual average increase of 18.5 percent in sales of existing homes in Georgia. The 89,000 sales were a combination of small declines during the first, third, and fourth quarters, offset by a 31 percent increase in the second quarter.

The changes have been smoother throughout 1988. In the first quarter, existing home sales climbed 9.4 percent over the last quarter of 1987. After modest monthly increases during the year, home sales jumped unexpectedly in June. This was partly due to consumers' efforts to beat an anticipated jump in mortgage interest rates.

Figures for the first half of 1988 show an annual average of 87,800 existing homes were sold in Georgia this year. This represents a 1.4 percent decline from the sales reported the year before. There are more new home sales than resales because builders anxious to move inventories are making deals that individual homeowners cannot match. The slowdown in sales is also a reflection of slower job growth. A comparison of the annual figures for the last eight years shows the continuous upward trend in sales of existing homes in Georgia. In 1982, sales declined a sharp 34.4 percent, but recovered to 42.5 percent the following year. Although the rate of increase slowed down in 1984 and 1985 to 17.8 and 8.3 percent, respectively, it rebounded to the 15 percent level in 1986.

The Federal Home Loan Bank Board publishes a monthly survey on the characteristics of conventional fully-amortized first mortgage loans closed on single-family homes during the first working days of each month. The figures for September 1988 show that the average purchase price in Georgia was $119,000. The figures are more varied in the metropolitan areas. In the Atlanta MSA, the average purchase price was $136,000 or 3.5 percent lower than in December 1987. The combination of a growing oversupply

Table 1

Private Housing Units Authorized

	Albany	Athens	Atlanta	Augusta	Columbus	Macon	Savannah	State
1980	NA	NA	22,058	1,667	576	1,145	1,152	34,837
1981	445	713	18,596	1,185	382	840	1,245	29,996
1982	496	780	24,015	2,258	560	1,255	1,839	38,737
1983	637	1,937	44,460	3,578	1,499	2,662	2,381	65,910
1984	791	1,322	50,131	4,265	1,122	2,083	1,754	70,264
1985	580	1,571	50,568	4,460	1,329	1,760	2,761	74,985
I	89	289	10,740	1,470	243	396	696	16,279
II	107	574	13,879	789	250	504	403	19,674
III	128	282	20,981	1,490	282	312	1,078	20,981
IV	93	393	13,396	657	554	376	374	17,387
1986	814	1,490	53,556	3,892	1,062	2,251	2,614	76,896
I	340	396	12,873	1,335	280	512	655	19,129
II	111	313	16,092	965	284	625	806	22,601
III	153	250	13,362	739	325	529	419	19,000
IV	210	531	11,229	853	173	585	734	16,166
1987								
I	69	232	11,263	525	682	401	413	15,713
II	82	323	10,919	554	246	489	698	16,055
III	109	226	12,033	426	141	428	601	17,632
IV	310	313	10,217	210	133	330	383	12,426
1988								
I	63	408	10,978	331	167	375	379	15,834
II	61	288	12,339	385	249	598	463	17,989
III	49	454	10,155	421	217	370	393	15,135
% CHANGE ON AN ANNUAL BASIS								
1986-1987	-43.1	-22.3	-17.5	-56.0	13.2	-12.3	-23.3	-14.5
I	-79.7	-41.4	-12.5	-60.7	143.6	-21.7	-36.9	-17.9
II	-26.1	3.2	-32.1	-42.6	-13.4	-21.8	-13.4	-18.4
III	-28.8	-9.6	-9.9	-42.4	-56.6	-19.1	43.4	-7.2
IV	-3.3	-29.2	-11.4	-75.6	-23.1	12.1	-60.1	-13.8
1987-1988								
I	-8.7	75.9	-2.5	-37.0	-75.5	-6.5	-8.2	0.8
II	-25.6	-10.8	13.0	-30.5	1.2	22.3	-33.7	-2.5
III	-55.0	100.9	-15.6	-1.2	53.9	-13.6	-34.6	-14.2

Source: U.S. Department of Commerce, Bureau of the Census, *Housing Units Authorized by Permit issuing Places* and unpublished reports.

of higher priced homes, financial uncertainty of middle-management workers who are being affected by layoffs or are worried about the possibility of layoffs, and more sales of moderately priced homes is holding prices down, forcing builders to subsidize mortgages, and making it increasingly difficult to sell existing homes in Atlanta. In the rest of the metropolitan areas, the numbers are small and the average price figures tend to be biased if there is a single purchase of a luxury home.

According to Databank, Cobb County had the largest number of new home sales in the Atlanta metro area during 1986 and 1987. A total of 5,210 new homes were sold in this county, followed by Gwinnett County with 5,186 new homes sold. Figures for 1987 were lower: 5,791 new homes were sold in Cobb and 5,682 new homes purchased in Gwinnett.

Mobile home shipments to Georgia are another indicator of the housing sector (summarized in Table 4). After an annual 11.8 percent decline in shipments to Georgia during 1987, the first two quarters of 1988 showed some recovery, with shipments raising 1.5 and 13.5 percent, respectively. Figures for the third quarter indicate that shipments declined 5.6 percent.

Tables continued on next page

Table 2

Value of Private Housing Units Authorized
(Thousands of Dollars)

	Albany	Athens	Atlanta	Augusta	Columbus	Macon	Savannah	State
1980	NA	NA	$746,102	$52,073	$19,573	$38,811	$46,572	$1,166,333
1981	$12,492	$20,071	648,789	39,378	14,845	30,364	51,765	1,018,380
1982	12,562	23,096	931,925	65,415	89,748	44,690	66,530	1,387,196
1983	18,279	56,613	1,625,171	120,311	50,961	86,300	73,252	2,367,445
1984	24,862	46,503	2,151,672	149,394	40,978	83,734	97,505	2,896,777
1985	22,062	63,381	2,289,203	152,809	49,089	77,661	136,264	3,245,941
I	4,028	11,702	480,295	43,251	9,095	19,574	39,455	684,250
II	4,170	22,072	634,407	33,859	9,998	20,461	25,928	877,146
III	5,126	12,972	881,761	49,141	13,641	17,815	44,288	881,757
IV	4,305	14,858	595,306	26,508	16,353	15,862	24,396	744,493
1986	30,053	65,802	2,787,681	187,267	47,502	103,452	158,993	3,868,204
I	9,524	17,682	646,224	57,490	11,455	23,599	34,419	907,800
II	5,717	17,921	838,033	52,899	12,580	29,374	51,463	1,158,014
III	7,041	12,527	634,860	42,599	12,618	24,077	33,097	912,090
IV	7,771	17,672	668,564	34,279	10,849	26,402	40,014	890,300
1987								
I	2,825	17,041	638,744	31,476	21,359	22,383	32,427	849,029
II	3,882	19,805	708,227	32,306	14,576	23,697	45,222	1,002,251
III	4,327	14,465	706,834	24,976	9,350	23,752	34,989	940,677
IV	2,717	16,014	660,955	13,386	6,563	19,167	31,121	743,270
1988								
I	2,620	20,620	668,399	19,308	9,458	24,203	28,278	927,424
II	3,123	18,312	777,898	24,160	11,636	26,612	35,643	1,070,970
III	2,458	27,917	628,190	22,770	10,097	20,547	29,245	900,676
% CHANGE ON AN ANNUAL BASIS								
1986-1987	-36.9	6.8	-2.9	-45.5	9.1	-4.6	-13.1	-1.1
I	-70.3	-3.6	-1.2	-45.2	86.5	-5.2	-5.8	-6.5
II	-32.1	10.5	-15.5	-38.9	15.9	-19.3	-12.1	-14.7
III	-38.5	15.5	11.3	-41.4	-25.9	-1.3	5.7	3.1
IV	1.9	7.3	-2.5	-61.2	-39.5	9.4	-36.4	17.6
1987-1988								
I	-7.3	21.0	4.6	-38.7	-55.7	8.1	-12.8	9.2
II	-19.6	-7.5	9.8	-25.2	-20.2	12.3	-21.2	8.4
III	-43.2	93.0	-11.1	-8.8	8.0	-13.5	-16.4	-4.3

Table 3

Existing Home Sales in Georgia for Single Family, Apartment Condos, & Co-ops
(000s of units)

Year	Annual Totals	Quarterly Totals* I	II	III	IV
1983	51.0	47.8	48.3	51.1	57.1
1984	60.1	65.9	63.9	51.1	58.7
1985	65.1	68.8	63.0	58.4	70.3
1986	75.1	71.8	70.9	78.4	83.7
1987	89.0	80.1	104.9	89.7	81.1
1988	87.8	88.7	86.8		

Note: Quarterly figures are seasonally adjusted annual rates.
Source: National Association of Realtors, "Existing Home Sales" and Annual Homes Sales Supplement (May 1988).

Table 4

Mobile Home Shipments to Georgia

Year	Annual Totals	Quarterly Totals I	II	III	IV
1983	16,268	3,297	4,401	4,226	3,794
1984	18,486	4,174	4,695	4,621	4,425
1985	20,199	4,995	5,640	5,180	4,384
1986	16,774	4,661	4,536	3,995	3,582
1987	14,797	3,373	3,797	4,040	3,587
1988		3,424	4,309	3,815	

Note: Quarterly totals may not add to annual totals because of revisions in monthly data.

Source: National Conference of States on Building Codes and Standards.

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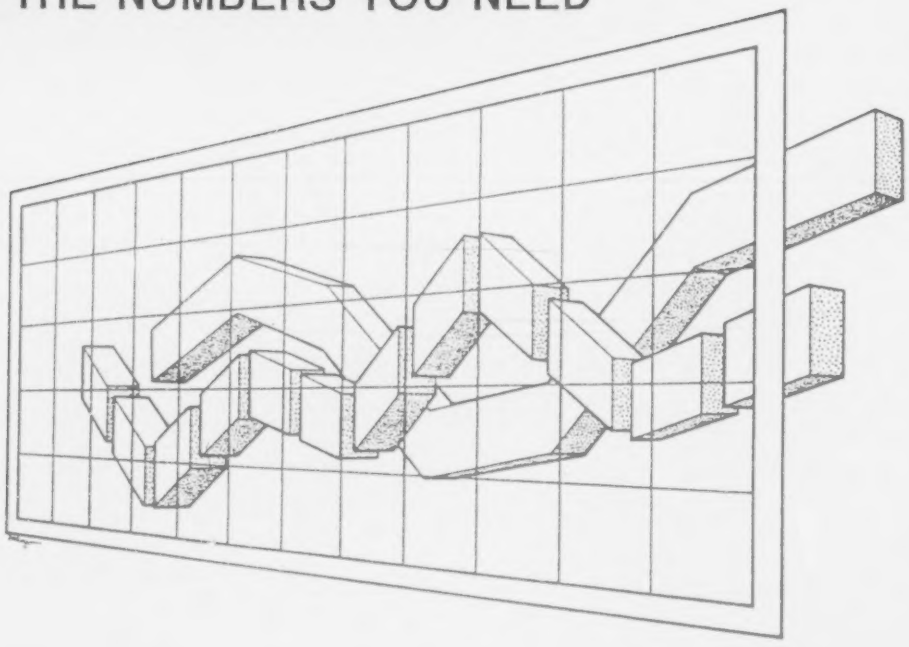

The ***Georgia Statistical Abstract 1988-89*** and the ***1989 Georgia Economic Outlook*** contain all the numbers you need for gauging the state's economic picture during the coming year.

The 1988-89 Statistical Abstract features over 500 pages of tables on Georgia's economic resources such as business enterprise, labor, income and wealth, manufactures, agriculture, and banking. It also highlights population, vital statistics, education, government, and law enforcement. Numbers are provided on a county-by-county basis, and comparisons are made with other contiguous states in the Southeast.

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GEORGIA BUSINESS STATISTICS

SERIES	AUG 1988	JULY 1988	JUNE 1988	AUG 1987
Georgia Leading Indicators Index[1] (1960=100)	178.60	179.68	180.34	179.09
Georgia Coincident Indicators Index[2] (1969=100)	560.21	569.61	563.03	565.15
Nonagricultural Employment[2] (thousands)	2,792.9	2,795.1	2,801.7	2,776.6
Manufacturing Employment[2] (thousands)	562.7	567.0	570.5	571.2
Average Weekly Earnings, Manufacturing[2] (dollars)	354.32	359.35	358.98	351.52
Help Wanted Advertising, Atlanta Index[3] (1967=100)	268	279	271	268
Taxable Retail Sales[4] ($ millions)	3,743.4	3,741.1	3,929.0	3,638.5
Building Permits[5]				
Residential Housing Units, Private (thousands)	5.7	4.8	6.5	5.2
Value of Residential Housing ($ thousands)	330,669	292,247	373,171	290,286
Value of Nonresidential Construction ($ thousands)	246,353	195,451	218,533	258,171
Industrial Buildings	22,682	28,912	20,937	10,561
Office, Bank and Other Professional Buildings	54,808	35,956	26,297	37,734
Stores and Other Mercantile Buildings	85,528	45,147	74,793	53,350
Other	113,335	85,436	96,506	156,526
Consumer Price Index[6] (CPI-U, all items)				
South U.S. (1982-84 = 100)	117.0	116.6	116.1	112.9
South/Population more than 1,200,000[a]	118.0	117.7	117.2	114.0
South/Population 450,000 - 1,200,000[a]	117.6	117.1	116.7	113.2
South/Population 50,000 - 450,000[a]	115.9	115.6	114.9	112.3
South/Population Less than 50,000[a]	115.3	115.0	114.5	110.9
Atlanta (1982-84=100)[b]	119.1[c]	–	–	115.5[c]
Prices Received by Farmers, Georgia Index[7] (1977=100)	140	143	130[r]	126
	1988:II	1988:I	1987:IV	1987:II
Total Personal Income[8] ($ millions)	93,703	92,371	92,416	87,833

[1] Georgia Economic Forecasting Project, Division of Research, College of Business Administration, University of Georgia. Initial monthly values subject to revision.

[2] Labor Information Systems, Georgia Department of Labor.

[3] Series published by The Conference Board, Inc.

[4] Derived by the Division of Research, College of Business Administration, University of Georgia, from data of the Sales and Use Tax System, Georgia Department of Revenue.

[5] U.S. Department of Commerce, Bureau of the Census.

[6] U.S. Department of Labor, Bureau of Labor Statistics, Southeastern Regional Office.

[7] Georgia Department of Agriculture, Georgia Crop Reporting Service.

[8] U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System.

[a] Group size revised as of January 1, 1987; indexes revised to 1982-84=100 base as of January, 1988.

[b] Atlanta index is average of each 6 months of the calendar year; base revised to 1982-84=100 as of January 1, 1988.

[c] Data are for 1st half, 1988, and first half, 1987, respectively.

[r] Revised.

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GEORGIA BUSINESS AND ECONOMIC CONDITIONS

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Population Changes in Georgia Between 1980 and 1987

Marie McGrath Libbey

Dramatic gains in population growth continue to place Georgia among the fastest growing states in the union. Recent Bureau of the Census reports detailing national population changes from 1980 to 1987 show Georgia ranking fourth in population increase, gaining 759,000 new residents in the 1980s. Georgia's resident population of 6,222,000 now ranks it eleventh among the fifty states. With an estimated growth of 13.9 percent in the last seven years, the state continues to add to its population at almost twice the national norm of 7.4 percent.

As Georgia continues to experience rapid gains in resident population, it is important to understand the locations and patterns of this growth. Where has the most rapid growth occurred, and who has moved where? By examining the origins of population growth and analyzing the changing base, state and local planners will have the information necessary to plan adequately for population - related needs and services.

POPULATION AND REGIONS

Populations grow in two ways: through natural increase and/or net migration. Natural increase is the number of births minus the number of deaths. Migration is the movement of people in and out of an area; net migration balances movement into against movement out of a given locale, and results in a positive or negative measure of change. As this analysis demonstrates, a substantial portion of Georgia's population increase is due to a high rate of net migration, with an overwhelming portion of this migratory growth occurring in suburban metropolitan regions.

In the November-December 1984 issue of *Georgia Business and Economic Conditions*, James Kundell and Howard Schretter* analyzed the state of Georgia on the basis of four regions: the highlands, the piedmont, the coastal plain, and the coast. The regional lines are drawn along natural breaks and borders in the Georgia topography and reflect the effects physiography, geology, hydrology, and soils have upon land development. In their article, Kundell and Schretter describe individual regional characteristics and discuss the natural resources a region may utilize and/or modify in order to support increasing population and industrial needs.

The highlands are a mountainous region, stretching across northern Georgia and containing a suburban portion of the Chattanooga MSA. The piedmont begins south of the highlands, cutting an east-to-west slash across the state, with its southern border formed by the end of the Appalachian foothills, at the geographic "fall line". This is the most densely populated area of the state, containing five MSAs, three of which are entirely Georgia based (Atlanta, Athens, and Macon-Warner Robins) and two (Augusta and Columbus) which cross state lines. The coastal plain is the largest geographic region, and contains the Albany MSA. The Savannah MSA forms the northern border of the smallest and final region, the coast, which includes the lower Savannah River and the southeastern coastline counties.

THE REGIONS

Table 1 details 1980-1987 aggregate population data for the four regions. The top half of the table reports actual or estimated data counts and includes appropriate percentage

* *James E. Kundell and Howard Schretter, Trends and Constraints in Georgia's Growth, Georgia Business and Economic Conditions, Vol. 44, No. 6, November-December, 1984.*

changes. The lower half shows a percentage distribution of the regions in relation to state totals or averages and illustrates the changes in regional populations by indicating: shifting patterns in the location of the population; increases in regional populations and net migrations, as percentages of the total state increase; and regional percentage increases compared to the average state percentage increase. Except for state totals, all aggregate data have been calculated using the April 1, 1980 county census counts and the July 1, 1987 rounded county population and net migration estimates.

The first part of the table shows that population in three of the four regions grew at rates exceeding the national average of 7.4 percent. The coastal plain, while continuing to add substantial numbers of new residents, is doing so only by natural increase, and is the only region to experience negative net migration. Growth in the piedmont and highlands clearly has been fueled by the expanding Atlanta metropolitan area, while the city of Savannah is the metropolitan anchor for the expanding coastal region.

The second part of the table details the role migration has played in the piedmont and illustrates how migration affects the population distribution within the state. Population increases in the piedmont accounted for 81.8 percent of the state's total population increase; however, migratory movement into the piedmont counties accounted for 92.4 percent of the total net migration movement. The large percentage increase in the portion of the state's population residing in the piedmont has forced a proportional percentage decline in each of the other three regions. Clearly, these data demonstrate the need for caution in comparing the lower, but quite substantial, individual regional growth rates against the extraordinary growth rate of the piedmont.

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MSA ANALYSIS

Table 2 details population changes in the metropolitan areas of Georgia, grouped by MSAs. State, metropolitan and nonmetropolitan areas, and MSAs values are provided. Separate aggregate values for the Georgia portion of each MSA crossing state lines (Augusta, Chattanooga, and Columbus) also are provided.

Between 1980 and 1987 all seven Georgia-based MSAs experienced increases in total population; however, migration rates for individual MSAs varied greatly. The largest total increase, 24.3 percent, occurred in the Atlanta MSA, driven by a 17 percent increase in net migration. The Augusta MSA recorded the next largest total increase, 13.5 percent, accompanied by a 6.3 percent migration rate. The Georgia portion of the Augusta MSA yielded a slightly lower migration rate than the total MSA, reduced by the 1.2 percent negative migration rate recorded in the Augusta MSA's central county, Richmond. The negative migration of Richmond County offset the 7.9 net percent migration increase experienced in Aiken County, South Carolina. Aiken County, a suburban MSA county on the state border, grew by 13.5 percent, adding approximately new 14,300 residents, since 1980.

The lowest rate of growth, 1.2 percent, was observed in the Chattanooga MSA. Although the total MSA had a negative net migration of 2.3 percent, the suburban Georgia portion sustained a 3.8 percent increase in population, and an increase of .3 percent in net migration.

METRO/ NON-METRO AREA ANALYSIS

While Georgia's overall population growth of 13.9 percent from 1980 to 1987 was almost twice the national average of 7.4 percent, growth occurred primarily in the metropolitan areas, as detailed in Table 3. The metro areas gained 615,088 new residents, an 18.1 percent increase between 1980 and 1987. The non-metropolitan regions added 145,923 persons, or 7 percent, slightly below the national average of 7.4 percent.

Of the 38 metropolitan counties, 52.6 percent (20 counties) grew at rates above the state average and 76.3 percent (29 counties) experienced growth rates at or above the U.S. average. Of the 121 non-metropolitan counties, 14.9 percent or 18 counties experienced growth rates above the state average and 31.4 percent (38 counties) expanded at or above the U.S. average. Two metropolitan counties (5.3

Table 1

Georgia's Four Geographic Regions,
1987 Population and 1980-1987 Population Changes*

Geographic Area	Population Census 1980	Population Estimate 1987	1980-1987 Change in: Population Number	Population Percent	Net Migration** Number	Net Migration** Percent
Piedmont	3,425,476	4,046,300	620,800	18.1	391,000	11.4
Highlands	649,669	710,500	60,800	9.4	35,100	5.4
Coastal Plain	1,043,135	1,079,800	36,700	3.5	-15,900	-1.5
Coastal	344,709	385,900	41,200	11.9	12,700	3.7
Georgia	5,462,989	6,222,000	759,000	13.9	423,000	7.7
U.S.	226,546,000	243,400,000	16,854,000	7.4	4,884,000	2.2

Distribution of Regions as Percentages of Georgia Total

Geographic Area	Population Census 1980	Population Estimate 1987	1980-1987 Change in: Population Number	Population Percent	Net Migration** Number	Net Migration** Percent
Piedmont	62.7	65.0	81.8	130.4	92.4	148.2
Highlands	11.9	11.4	8.0	67.4	8.3	70.2
Coastal Plain	19.1	17.4	4.8	25.3	-3.8	-19.8
Coastal	6.3	6.2	5.4	86.0	3.0	47.8
Georgia	100.0	100.0	100.0	100.0	100.0	100.0

Note: Calculations by Division of Research, College of Business Administration, University of Georgia, Athens, GA.

* Official published totals; numbers may not add to 100 due to rounding.
** Both from other states and outside the United States.

Sources: Data from U.S. Department of Commerce, Bureau of the Census, and unpublished data, 1988.

percent), and 32 (26.4 percent) non-metropolitan counties have lost population since the 1980 census.

Net migration was positive in 29 of the 38 metropolitan counties, representing an increase of 11.1 percent in Georgia's metropolitan population. Fifty-eight, or almost half of Georgia's 121 non-metropolitan counties gained approximately 45,100 new residents through net migration, generating a 2.2 percent increase in the non-metropolitan population since 1980.

Large differences are seen in growth and migration rates between the urban central MSA counties and the suburban MSA counties. Urban central counties are characterized by comparatively lower rates of growth and low or negative population changes attributed to migration. While only two (28.6 percent) of the seven central counties exceeded the U.S. average population increase, 64.5 percent or 20 of the 31 suburban counties exceeded the state average, and 87.1 percent (27) exceeded the national average. Changes in migration follow similar patterns, with measures of net migration ranging from a gain of 3 percent in Fulton County to a loss of 7.1 percent in Dougherty County. Among the suburban metropolitan counties, 21 (67.7 per-

Table 2

MSA Population 1980 and 1987,
With Population Changes, 1980-1987

MSA/Area	Population 1980 Census	Population 1987 Estimate	Changes in Population, 1980-1987: Population Number	Population Percent Increase	Approx. Natural Increase	Net Migration Number	Net Migration Percent Increase
Atlanta, GA	2,138,136	2,656,800	518,600	24.3	155,400	363,000	17.0
Albany, GA	112,394	117,200	4,800	4.3	9,300	-4,500	-4.0
Athens, GA	130,015	141,900	11,900	9.2	6,900	4,900	3.8
Augusta, GA-SC	345,923	392,500	46,600	13.5	18,800	21,800	6.3
Augusta, GA only	240,293	272,600	32,300	13.4	18,800	13,500	5.6
Chattanooga, TN-GA*	426,443	431,500	5,100	1.2	3,900	-10,000	-2.3
Chattanooga, GA only	105,779	109,800	4,000	3.8	3,900	300	0.3
Columbus, GA-AL	239,196	245,900	6,700	2.8	13,900	-9,100	-3.8
Columbus, GA only	191,840	195,400	3,600	1.9	13,900	-10,300	-5.4
Macon-Warner Robins, GA	263,591	282,600	19,000	7.2	14,900	4,200	1.6
Savannah, GA	220,553	241,400	20,900	9.5	14,300	6,700	3.0
GA Metro	3,402,601	4,017,700	615,100	18.1	237,400	377,900	11.1
GA Non-Metro	2,060,381	2,204,300	14,400	7.0	98,600	45,100	2.2
Georgia	5,462,982	6,222,000	759,011	13.9	336,000	423,000	7.7

Notes: Percentages are computed on Migration data, which have been rounded to the nearest hundred. 1987 population data are estimated, 1980 data are census data. Natural Increase is the increase of births over deaths. When possible, rounded census data have been used; when not available, percentages and totals have been computed by the Division of Research.

* Chattanooga, TN-GA MSA is based in Tennessee.

Sources: Data from U.S. Department of Commerce, Bureau of the Census, and unpublished data, 1988.

cent) exceeded the 7.8 percent state net migration average.

COUNTY ANALYSIS

Table 4 shows population estimates for the state and individual counties of Georgia. Population changes and percentage changes from 1980 to 1987 are official census estimates, and are based upon unpublished, unrounded data. "Approximate natural increase" is calculated by subtracting total deaths from total births, for the years 1980 through 1987, using the rounded birth and death totals provided by the census bureau. Figures on county net migration numbers and rates are census data, calculated by them from unrounded data.

Table 5 lists the ten highest and ten lowest ranking counties for each of the columns detailed in Table 4. As column 1 indicates, in 1987 the ten most populated counties totaled 2,904,700 residents and comprised 46.7 percent of the total Georgia population; in 1980 the ten most populated counties totaled 2,492,747 residents and accounted for 45.6 percent of the Georgia population. These counties all are located in metropolitan areas, with eight of these counties in the piedmont. Five of Georgia's most populated counties are found in the Atlanta MSA. Of the ten counties with the smallest number of residents, only Glascock and Taliaferro are north of the fall line.

With the exception of Chatham, the central county in the Savannah MSA, the nine counties experiencing the largest number of new residents are in the piedmont, with eight of those nine in the Atlanta MSA. Altogether, the 473,423 new residents of the top ten counties account for 62.4 percent of the total 1980-87 Georgia population in-

Continued on page 10

Productivity in Georgia: An Analysis of the Gross State Product

Tim Allen

Over the last 25 years, Georgia experienced significant economic growth and it is likely that this growth will continue. One way to track Georgia's economic growth is by historical analysis of the value of goods and services produced in the state.

Historical gross state product estimates allow comparison among states and regions for relative size and movement of production, per capita productivity, and productivity by industry. The analysis presented here examines the GSP estimates for Georgia and for the twelve-state BEA-defined Southeast region. It points out specific levels and trends in GSP, identifies the industries of primary significance for Georgia and the Southeast, and highlights structural changes occurring within the state and the region. Finally, the article assesses the state's current GSP and provides insight into future productivity.

STATE RANKINGS

The data in Table 1 show that of the southeastern states, only Florida had a larger gross state product than did Georgia for the years 1963 to 1986. Georgia's total GSP in 1986 exceeded the Southeast average by 40 percent. In terms of compound annual rates of growth, Florida was first again, but by a much narrower margin.

Georgia's gross state product has grown 1 percent faster, annually, than the Southeast's as a whole. Interestingly, the compound annual growth rates of nine out of the twelve southeastern states exceed the compound growth rate of total gross state product for the nation. Note that Kentucky, Louisiana and West Virginia, states whose industries depend heavily on energy-related production, have extremely low average annual rates of growth over the study period. Table 1 supports the hypothesis that Georgia is very productive when compared to the other states in the Southeast.

MOST PRODUCTIVE INDUSTRIES

Table 2 presents the proportion of gross state product for Georgia and the Southeast contributed by various industries for selected years. Table 3 presents growth rates in total output by sector for Georgia, the Southeast, and the United States during the study period. For the major categories, private industry contributes a much larger portion to the total, at the expense of the government sector. This table shows that negative growth levels in civilian federal government spending in the Southeast and in Georgia during the 1970s drastically lowered the government sector's contribution to the state's goods and services. State and local governments average growth was only 1.2 percent in the Southeast and 1.7 percent in Georgia during the current decade. Overall, Georgia's private sector's rate of growth increased each year of the study, and each decade's growth is higher than that of the previous decade. This compares to a declining, yet still positive growth rate for the government sector's total over the last three decades.

Agriculture. While the Southeast may be perceived as an agricultural region, agriculture comprises only 2.6 per-

The U.S. Bureau of Economic Analysis (BEA) released gross product estimates, for the first time, in May 1988. Spanning 1963 to 1986, these estimates are the state level equivalent of the gross national product. Both measure the market value of goods and services produced in one year. GSP estimates are available in both current and constant dollar figures. The constant dollar estimates used in this study, deflated by national industry price deflators, have a base year of 1982. Using constant dollar instead of current dollar estimates allows analysis of changes and trends in the physical volume of production by area without the influence of local price level inflation.

Table 1

Gross State Product, Selected Years
(Millions of 1982 Dollars)

	1963	1970	1980	1986	Compund Annual Rate of Growth 1963-1986
United States	1,863,146	2,384,793	3,111,206	3,681,144	3.0%
Southeast	320,114	438,782	627,008	762,322	3.8
Alabama	22,509	28,418	40,380	48,409	3.4
Arkansas	12,186	15,392	23,210	28,168	3.7
Florida	46,008	69,641	113,857	152,269	5.3
Georgia	30,899	43,105	64,216	88,827	4.7
Kentucky	26,015	32,182	42,637	47,502	2.7
Louisiana	41,694	62,666	75,312	68,508	2.2
Mississippi	14,051	17,306	25,082	27,987	3.0
North Carolina	35,164	48,047	68,065	87,371	4.0
South Carolina	14,847	20,924	31,303	39,281	4.3
Tennessee	26,295	34,769	51,810	64,124	4.0
Virginia	35,425	48,269	68,787	88,171	4.0
West Virginia	15,021	18,063	22,349	21,705	1.6

Source: Bureau of Economic Analysis, GSP Estimates, released May 1988.

cent of Georgia's total gross state product. Even so, agriculture is the fastest growing industry in the state this decade. While the 1960s and 1970s experienced negative annual compound growth in agriculture, the sector grew by an average rate of 12.9 percent each year between 1980 and 1986. Gains in efficiency and other factors increased the total output from $30.9 billion in 1963 to $88.8 billion in 1986. The relative contribution of agriculture to the GSP is small, but the current growth trend suggests that the contribution may become more significant in future years. Because the sector depends on federal programs and policies, which are often variable even in the short run, and is vulnerable to droughts, shortages and surpluses, versatility is important. Overall, Georgia's agricultural producers have adapted well during this decade, when compared to other southeastern states.

Mining. As expected, mining is a small proportion of the state's output. Like agriculture, though, Georgia's mining industry grew almost 6 percent annually from 1980 to 1986. Even with this growth rate, the mining industry made only a .6 percent contribution to the total gross state product. For mining in the Southeast, the annual growth is negative over the same period. Despite its relatively small contribution, Georgia's mining industry, which depends mainly on clay and non-metal minerals, is not as volatile as it is in states whose mining industry consists primarily of oil extraction or coal mining.

Construction. The annual compound growth rate of 6.9 percent for the state's construction industry between 1980 to 1986 was six times that for the industry in the Southeast as a whole. This growth rate is mainly a function of the rapid commercial and residential development of land in the metropolitan Atlanta area. Recent vacancy level estimates for Atlanta's office space indicate that this growth may slow for the rest of this decade, however. On the other hand, residential development will continue to prosper as more people move into the state, though localized overbuilding may occur.

Manufacturing. Both durable and nondurable goods manufacturing is an important source of productivity in the Southeast and in Georgia. The contribution made by manufacturers of nondurable goods in Georgia consistently exceeds 10 percent in each of the poll years of the study. Economic theory supports the idea that nondurable goods have a more vertical demand curve than durable goods, i.e., when prices for the goods rise, the demand likely will remain high in the short run due to the nature of the goods

Table 2

Percentage of GSP Contributed, by Industry, in Georgia and the Southeast

	Georgia GSP as a Percent of the State Total				Southeast GSP as a Percent of the Region Total			
	1963	1970	1980	1986	1963	1970	1980	1986
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Private Industries	81.3	82.3	85.3	88.3	84.3	84.8	86.3	87.8
Agriculture	5.2	3.2	1.7	2.6	5.0	3.4	2.5	2.8
Mining	0.4	0.6	0.6	0.6	8.5	9.8	5.9	4.1
Construction	9.4	7.1	4.9	5.3	9.4	7.3	5.8	5.1
Manufacturing	18.5	19.8	21.8	22.3	18.2	19.3	20.6	21.7
Durable Goods	8.1	8.4	8.5	9.8	7.3	8.2	9.0	11.0
Nondurable Goods	10.4	11.4	13.3	12.5	10.9	11.1	11.6	10.7
Transportation	4.7	5.2	5.7	4.8	4.2	4.3	4.3	3.6
Communication	1.3	1.9	3.1	3.2	1.1	1.5	2.6	2.7
Public Utilities	1.8	2.3	2.8	2.7	2.0	2.3	2.7	2.9
Wholesale Trade	7.8	8.6	9.3	10.6	5.3	5.9	6.4	7.2
Retail Trade	9.6	10.1	9.9	10.3	9.0	9.1	9.7	10.6
Fin, Ins, RE	11.7	12.1	13.0	12.6	11.1	11.1	13.3	13.6
Services	10.9	11.4	12.6	13.2	10.5	10.8	12.5	13.6
Government	18.7	17.7	14.7	11.7	15.7	15.2	13.7	12.2
Federal Civilian	5.7	5.1	3.6	2.9	4.4	3.9	3.2	2.8
Federal Military	6.2	4.6	2.6	2.0	4.4	3.8	2.5	2.4
State and Local	6.8	7.9	8.5	6.8	6.9	7.4	8.0	7.1

Source: Computed from BEA GSP Estimates, May 1988.

and the relatively small proportion of buyers' income they consume. Heavy concentration in nondurable goods manufacturing provides stability in the event of short-run inflation. Between 1980 and 1986, durable goods manufacturing increased by more than an 8 percent annual compound rate, while nondurable goods manufacturing only grew by 4.5 percent each year. Over 8 percent of Georgia's gross state product is attributable to producers of durable goods. In terms of total volume, the manufacturing segment is the dominant contributor to the state's gross product, providing nearly $14 billion to the total product in 1986 alone.

Growth in the manufacturing industry, like other industries, occurs primarily by increasing capacity — either by adding more people or by implementing advanced technology. Both methods require availability of an adequate workforce. As production technology advances, firms require higher skill levels of their employees; therefore, an educated workforce becomes increasingly important to firms evaluating locations for high-technology processes or for plant expansion. Another major consideration is the availability of transportation services for both raw materials and finished products. A top quality transportation system, service sector, and education system would help the state attract new producers and retain current ones.

Trade. Together, retail and wholesale trade comprised over 20 percent of Georgia's GSP in 1986. High personal income levels mean more disposable income is available to support the trade industries. The explosive development of shopping malls in the metropolitan areas of the state attracts retail chain stores to Georgia. This industry, however, is susceptible to heavy decline in the event of a national economic downturn. Its continued success depends on residents' ability to maintain certain levels of personal income.

Services. Growth in the service industry in Georgia (6.4 percent) was slightly higher than that sector's growth for the Southeast (4.8 percent) in 1986. By providing high quality services, the state has more opportunity to attract

new industries and to maintain current ones. The service sector includes contributions made to the gross state product by private households, legal, health, recreation and other common services necessary in a prosperous economy. Growth in service output reflects an increasing demand, which indicates the strength of the overall economy.

Finance, Insurance and Real Estate. Like the service sector, finance, insurance and real estate industries are a necessary part of the economy. This sector consistently comprises approximately 12 percent of the state's gross state product over the study period, and accounts for 5 percent of GSP growth annually from 1980 to 1986. As the South's dominant financial market, Atlanta accounts for most of the state's steady growth in this sector.

Overall, the relative importance of the various industries in Georgia is proportionately balanced with the industries in other states in the Southeast. Diversification by industries provides the stability needed to maintain productivity and the flexibility to explore new avenues while minimizing the impact of industry-wide economic contractions.

PER CAPITA PRODUCTIVITY

Analysis of gross state product totals and industry growth rates shows positive trends in Georgia's total output of goods and services. Not only has the output increased, but the output per capita also increased. The population of Georgia grew by 1.4 percent each year between 1970 and 1980, and by 1.3 percent each year between 1980 and 1986. Per capita growth during the same periods totaled 2.5 percent and 3.7 percent, respectively.

The Southeast as a whole experienced higher per capita productivity growth than either Georgia or the U.S. during the 1970s. In fact, the per capita productivity of the Southeast grew more than twice as fast as it did for the nation. Georgia, however, experienced faster growth than either the Southeast or the U.S. during the current decade. Higher growth rates for Georgians' productivity is partially attributable to businesses' increased investment in more efficient production methods. Separate analysis of the number of workers per state reveals that Georgians are more active producers than those in many other southeastern states. Average per capita productivity has risen each year

Table 3

Growth in Total Output by Sector

	Compound Annual Growth % Georgia's Gross Product			Compound Annual Growth % 50-State Total GSP			Compound Annual Growth Rate Southeast Gross Product		
	63-70	70-80	80-86	63-70	70-80	80-86	63-70	70-80	80-86
Total	4.9	4.1	5.6	3.6	2.7	2.8	4.6	3.6	3.3
Private Industries	5.1	4.4	6.2	3.6	2.9	3.1	4.7	3.8	3.6
Agriculture	-2.1	-2.1	12.9	0.3	1.0	4.7	-1.1	0.7	5.0
Mining	9.1	4.3	6.0	4.0	0.1	-2.3	6.8	-1.4	-3.0
Construction	0.8	0.3	6.9	-0.8	-0.4	0.7	0.9	1.2	1.1
Manufacturing	5.9	5.0	6.0	3.5	2.8	3.4	5.4	4.3	4.2
Durable Goods	5.4	4.2	8.1	3.5	2.8	4.3	6.4	4.6	6.8
Nondurable Goods	6.2	5.6	4.6	3.5	2.7	1.8	4.8	4.1	1.9
Transportation	6.2	5.0	2.6	3.6	2.3	0.0	4.7	3.6	0.5
Communication	10.4	9.2	6.3	8.4	6.7	3.3	9.8	9.4	3.9
Public Utilities	8.7	6.0	4.9	5.9	3.6	3.3	6.9	5.3	4.2
Wholesale Trade	6.4	4.8	8.0	5.4	3.5	4.8	6.3	4.4	5.5
Retail Trade	5.6	3.8	6.3	3.5	2.9	4.0	4.9	4.2	4.9
Fin, Ins, RE	5.4	4.8	5.1	4.5	3.8	2.9	4.7	5.5	3.7
Services	5.6	5.1	6.4	4.5	4.1	4.2	5.0	5.1	4.8
Government	4.0	2.2	1.6	3.7	1.5	0.9	4.1	2.6	1.3
Federal Civilian	3.3	0.3	2.0	2.2	0.2	0.5	3.0	1.6	0.6
Federal Military	0.4	-1.6	0.9	1.9	-1.5	2.3	2.5	-0.6	2.4
State and Local	7.3	4.8	1.7	4.9	2.8	0.9	5.7	4.4	1.2

Source: Computed from BEA GSP Estimates, May 1988.

Table 4

GSP for Georgia and the Southeast (Millions of Dollars)

	Georgia's Gross State Product in Constant (1982) Dollars				Southeast Gross Product in Constant (1982) Dollars			
	1963	1970	1980	1986	1963	1970	1980	1986
Total	30,899	43,105	64,216	88,827	320,114	438,784	627,009	762,321
Private Industries	25,126	35,492	54,780	78,439	269,885	372,196	540,852	669,322
Agriculture	1,604	1,378	1,115	2,313	15,951	14,772	15,778	21,186
Mining	133	244	372	527	27,096	42,852	37,199	30,900
Construction	2,891	3,051	3,158	4,707	30,242	32,197	36,429	38,985
Manufacturing	5,726	8,547	13,973	19,815	58,368	84,558	129,211	165,123
Durable Goods	2,498	3,613	5,453	8,683	23,347	35,954	56,341	83,637
Nondurable Goods	3,228	4,934	8,521	11,131	35,020	48,604	72,870	81,486
Transportation	1,457	2,224	3,639	4,242	13,577	18,685	26,696	27,428
Communication	410	821	1,981	2,859	3,471	6,679	16,400	20,618
Public Utilities	559	1,004	1,804	2,405	6,401	10,198	17,062	21,807
Wholesale Trade	2,410	3,714	5,960	9,435	16,916	25,949	40,099	55,165
Retail Trade	2,978	4,373	6,350	9,171	28,738	40,136	60,558	80,739
Fin, Ins, RE	3,604	5,223	8,349	11,228	35,528	48,854	83,320	103,833
Services	3,355	4,913	8,081	11,738	33,598	47,314	78,098	103,538
Government	5,773	7,614	9,436	10,389	50,228	66,588	86,157	92,999
Federal Civilian	1,768	2,219	2,281	2,574	14,071	17,329	20,335	21,121
Federal Military	1,915	1,972	1,685	1,778	13,948	16,597	15,638	18,036
State and Local	2,090	3,422	5,470	6,036	22,209	32,662	50,184	53,842

Source: Computed from BEA GSP Estimates, May 1988.

since 1963 and this growth probably will continue.

GEORGIA'S POSITION AS A MARKET LEADER

Rapid economic growth characterizes Georgia as a dominant market player in the economy of the Southeast and the nation. The total market value of goods and services produced in the state is now at record levels. The growth in output occurred across almost all sectors of the state's economy. For instance, construction experienced tremendous growth from 1980 to 1986 and now contributes about as much to the state's economy as the sector does to the economy of the Southeast in total. Other industries grew at levels that exceed the growth levels for the Southeast and now make up a greater proportion of Georgia's gross state product than do the same industries at the regional level.

Much of the state's economic stability is due to industrial diversification. Favorable business and social climates in the state attract and maintain new growth in the various sectors of the economy. In order to perpetuate this current growth, however, Georgia's business and political leaders must recognize the factors that encourage economic growth and make every attempt to guarantee that opportunities for success exist. Developing a quality physical and social infrastructure, with emphasis on education, transportation, government services and private services, will allow Georgia to continue growing.

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Population Changes
Continued from page 4

Table 3

Percentage Distributions of MSA Population and Population Changes, 1980-1987

MSA/Area	Population 1980	Population 1987	1980-87 MSA/Area Increase as a Percent of Total 1980-87 State Increase: Total Population Increase	Approximate Natural Increase	Net Migration
Atlanta, GA	39.1	42.7	68.3	46.3	85.8
Albany, GA	2.1	1.9	0.6	2.8	-1.1
Athens, GA	2.4	2.3	1.6	2.1	1.2
Augusta, GA only	4.4	4.4	4.3	5.6	3.2
Chattanooga, GA only	1.9	1.8	0.5	1.2	0.1
Columbus, GA only	3.5	3.1	0.5	4.1	-2.4
Macon-Warner Robins, GA	4.8	4.5	2.5	4.4	1.0
Savannah, GA	4.0	3.9	2.7	4.3	1.6
GA Metro	62.3	64.6	81.0	70.7	89.3
GA Non-Metro	37.7	35.4	19.0	29.3	10.7
Georgia	100.0	100.0	100.0	100.0	100.0

Notes: Percentages are computed on migration data, which have been rounded to the nearest hundred. 1987 population data are estimated, 1980 data are census data. For base population data, see Table 2. Natural Increase is the increase of births over deaths. When available rounded census data have been used; otherwise, percentages and totals have been computed by the Division of Research.

Sources: Data from U.S. Department of Commerce, Bureau of the Census, and unpublished data, 1988.

crease. Eight of the ten counties losing the most residents since 1980 are located in the southwest corner of the state, six of those in the coastal plain and two in the lower southwestern corner of the piedmont. The other two counties losing population, Dade and Floyd, are located in the northwestern highlands.

The ten counties with the highest percentage increases in their population bases recorded growth rates ranging from 37.3 percent to 81 percent. Six of the counties gaining the largest percentage of new residents from their 1980 base are in the Atlanta MSA. Increases in the coastal counties of Camden and Bryan most likely reflect the expanded activity on nearby military bases. The 62.1 percent increase in the population of Dawson County, located on the southern edge of the highlands and bordering the northeastern end of the Atlanta MSA, is particularly noteworthy. This county has grown tremendously in the last seven years, with almost all of the increase attributed to positive net migration. In contrast are the ten counties with the greatest percentages of population loss. The 20.1 percent loss in Chattahoochee County, is primarily an artifact of the presence of the military. Of the remaining nine counties, which lost between 3.9 and 6.3 percent of their 1980 population bases, eight are located near the western border of the coastal plain or in the extreme southwest piedmont; Glascock County, lying in the southeastern piedmont, is the exception in terms of location.

Of the ten counties experiencing the largest number of new residents arriving through migration, nine are located in the Atlanta MSA. These nine counties accounted for 318,300 new arrivals or 75.2 percent of the total 1980-87 Georgia population increase attributed to net migration.

Table 4

Components of Change in Georgia's Counties, 1980-1987

County	1987 Population	Population Change 1980-1987 Number	Percent	Approx. Natural Increase	Net Migration 1980-1987 Number	Percent	Rankings* 1987 Population	Percent Change 1980-1987 Population	Net Migration
Appling	16,400	800	5.2	800	0	0.2	80	81	84
Atkinson	6,400	300	4.4	300	0	-0.8	144	90	97
Bacon	9,800	400	4.3	400	0	-0.4	115	91	91
Baker	3,700	-100	-2.2	100	-200	-4.4	152	142	133
Baldwin	39,000	4,300	12.4	1,900	2,400	6.9	34	42	43
Banks	10,400	1,700	19.9	300	1,400	16.2	112	22	21
Barrow	26,500	5,100	24.1	1,100	4,000	18.7	51	17	16
Bartow	50,700	10,000	24.5	2,700	7,200	17.7	26	16	17
Ben Hill	17,200	1,200	7.8	700	600	3.6	78	64	65
Berrien	13,900	400	3.1	500	-100	-0.5	91	106	92
Bibb	156,500	6,200	4.1	6,400	-100	-0.1	9	98	88
Bleckley	10,600	-200	-1.7	300	-400	-4.1	111	140	127
Brantley	10,100	1,400	16.3	400	1,000	11.8	114	33	31
Brooks	15,100	-200	-1.2	600	-700	-4.8	87	136	136
Bryan	14,500	4,300	42.6	1,000	3,400	33.0	89	7	8
Bulloch	37,400	1,600	4.5	1,900	-200	-0.6	37	88	94
Burke	21,400	2,100	10.7	1,400	700	3.6	61	50	66
Butts	16,100	2,400	17.7	600	1,800	13.2	82	25	25
Calhoun	5,400	-400	-6.3	200	-500	-9.0	148	158	155
Camden	20,800	7,400	55.5	1,800	5,600	42.1	63	5	5
Candler	7,500	0	-0.6	0	-100	-0.7	134	133	96
Carroll	67,200	10,800	19.2	3,400	7,400	13.2	19	23	26
Catoosa	40,400	3,500	9.3	1,700	1,800	4.8	31	56	51
Charlton	8,100	700	10.1	400	300	4.2	129	51	58
Chatham	218,100	15,900	7.8	13,000	2,900	1.5	5	65	76
Chattahoochee	17,400	-4,400	-20.1	2,000	-6,300	-29.2	76	159	159
Chattooga	21,600	-200	-1.1	400	-600	-2.9	59	135	118
Cherokee	81,000	29,300	56.7	5,800	23,400	45.4	13	4	4
Clarke	77,600	3,100	4.2	3,900	-900	-1.1	15	94	101
Clay	3,400	-200	-4.6	0	-200	-5.5	154	152	141
Clayton	169,200	18,800	12.5	13,300	5,500	3.7	8	41	64
Clinch	6,900	200	3.2	300	-100	-2.0	141	104	112
Cobb	408,600	110,900	37.3	26,400	84,500	28.4	3	10	10
Coffee	29,800	2,900	10.8	1,600	1,300	4.7	46	49	52
Colquitt	37,300	1,900	5.4	1,600	300	0.9	38	79	80
Columbia	59,700	19,600	48.8	4,600	15,000	37.3	20	6	6
Cook	14,000	600	4.1	600	0	-0.1	90	99	89
Coweta	48,300	9,000	22.9	2,500	6,400	16.4	29	18	20
Crawford	7,200	-500	-6.1	400	-800	-10.4	137	156	157
Crisp	20,300	800	4.1	1,100	-300	-1.4	65	100	108

(continued)

Table 4 (continued)

County	1987 Population	Population Change 1980-1987 Number	Population Change 1980-1987 Percent	Approx. Natural Increase	Net Migration 1980-1987 Number	Net Migration 1980-1987 Percent	Rankings* 1987 Population	Rankings* Percent Change 1980-1987 Population	Rankings* Percent Change 1980-1987 Net Migration
Dade	12,000	-300	-2.4	600	-900	-7.1	102	143	150
Dawson	7,700	3,000	62.1	300	2,600	54.5	132	3	3
Decatur	26,700	1,200	4.7	1,200	0	0.1	50	86	86
DeKalb	538,700	55,600	11.5	30,700	24,900	5.2	2	46	50
Dodge	17,300	300	2.0	300	100	0.3	77	110	83
Dooly	10,300	-500	-5.0	400	-1,000	-9.0	113	154	156
Dougherty	101,800	1,100	1.1	8,200	-7,100	-7.1	10	119	151
Douglas	70,600	16,000	29.4	4,500	11,600	21.3	17	14	14
Early	13,100	-100	-0.7	600	-700	-5.3	94	134	140
Echols	2,300	0	1.1	100	-100	-4.2	155	120	128
Effingham	23,400	5,000	27.4	1,300	3,800	20.6	53	15	15
Elbert	19,000	300	1.5	600	-400	-1.9	72	116	110
Emanuel	22,000	1,200	5.7	1,100	100	0.5	58	78	82
Evans	8,400	0	-0.1	400	-400	-4.9	128	126	139
Fannin	16,100	1,300	8.9	0	1,300	9.0	83	58	36
Fayette	52,000	23,000	79.2	2,300	20,800	71.5	25	2	1
Floyd	79,400	-400	-0.5	2,300	-2,700	-3.4	14	131	123
Forsyth	39,900	11,900	42.6	1,900	10,000	35.6	33	8	7
Franklin	16,400	1,200	8.0	300	900	5.9	81	63	48
Fulton	639,000	49,100	8.3	31,100	17,900	3.0	1	61	69
Gilmer	12,900	1,800	16.4	400	1,400	12.6	97	32	28
Glascock	2,200	-100	-5.7	0	-100	-4.5	158	155	134
Glynn	59,700	4,700	8.5	2,600	2,100	3.8	21	59	60
Gordon	32,800	2,700	9.0	1,500	1,100	3.8	44	57	61
Grady	22,300	2,400	12.2	700	1,700	8.7	56	44	37
Greene	11,900	500	4.1	600	-100	-1.0	104	101	100
Gwinnett	302,000	135,200	81.0	21,700	113,500	68.0	4	1	2
Habersham	27,900	2,800	11.4	800	2,000	8.2	48	48	40
Hall	88,200	12,500	16.5	4,300	8,200	10.9	11	31	34
Hancock	9,300	-200	-1.6	400	-600	-6.0	119	139	144
Haralson	20,500	2,100	11.5	600	1,500	8.0	64	47	41
Harris	17,000	1,500	9.7	500	1,000	6.4	79	55	46
Hart	19,700	1,100	6.0	300	900	4.7	69	76	53
Heard	7,500	1,000	14.7	200	800	12.1	135	37	30
Henry	50,200	13,900	38.2	2,600	11,300	31.1	27	9	9
Houston	87,100	9,500	12.3	6,300	3,300	4.3	12	43	57
Irwin	8,800	-200	-1.8	300	-500	-5.5	123	141	142
Jackson	29,100	3,800	14.9	1,100	2,700	10.6	47	36	35
Jasper	7,900	400	5.2	200	100	1.5	131	82	77
Jeff Davis	12,000	500	4.2	500	-100	-0.5	103	95	93

(continued)

Table 4 (continued)

County	1987 Population	Population Change 1980-1987 Number	Population Change 1980-1987 Percent	Approx. Natural Increase	Net Migration 1980-1987 Number	Net Migration 1980-1987 Percent	Rankings* 1987 Population	Rankings* Percent Change 1980-1987 Population	Rankings* Net Migration
Jefferson	18,700	300	1.5	900	-600	-3.5	73	117	124
Jenkins	8,600	-300	-3.1	300	-600	-6.9	126	147	148
Johnson	8,600	0	-0.3	400	-300	-3.9	127	129	126
Jones	19,100	2,500	15.0	1,100	1,300	7.9	71	35	42
Lamar	13,000	800	6.6	300	500	4.0	96	73	59
Lanier	5,900	200	4.1	400	-100	-2.4	146	102	114
Laurens	38,900	2,000	5.3	1,500	500	1.2	35	80	78
Lee	15,400	3,700	31.8	1,100	2,600	22.2	86	12	13
Liberty	40,100	2,500	6.8	8,100	-5,600	-15.0	32	71	158
Lincoln	7,200	500	7.4	200	300	4.7	138	67	54
Long	5,100	600	12.8	600	0	-0.8	150	40	98
Lowndes	73,500	5,600	8.2	5,100	500	0.7	16	62	81
Lumpkin	12,600	1,900	17.3	500	1,400	13.2	99	29	27
Macon	13,600	-400	-2.8	400	-800	-5.5	93	145	143
Madison	20,300	2,500	14.2	1,000	1,500	8.6	66	38	38
Marion	5,300	0	-0.1	300	-200	-4.5	149	127	135
McDuffie	20,100	1,600	8.5	900	700	3.8	67	60	62
McIntosh	9,300	1,200	15.3	700	500	6.6	120	34	44
Meriwether	21,400	200	0.8	700	-600	-2.8	62	123	117
Miller	7,000	0	-0.3	300	-300	-3.6	139	130	125
Mitchell	21,600	500	2.4	1,400	-900	-4.2	60	108	129
Monroe	15,600	1,000	6.8	500	500	3.2	84	72	68
Montgomery	7,300	300	4.5	100	200	2.7	136	89	71
Morgan	12,700	1,100	9.9	600	500	4.5	98	53	56
Murray	23,300	3,600	18.2	1,300	2,300	11.8	54	24	32
Muscogee	178,000	7,900	4.7	11,900	-4,000	-2.4	7	87	115
Newton	42,200	7,500	21.6	2,400	5,100	14.7	30	19	23
Oconee	14,900	2,500	20.1	900	1,600	12.6	88	21	29
Oglethorpe	9,600	700	7.7	300	300	3.8	117	66	63
Paulding	34,100	8,000	30.6	2,000	6,000	22.9	42	13	12
Peach	20,000	800	4.2	1,100	-200	-1.3	68	96	106
Pickens	13,700	2,000	17.5	400	1,700	14.3	92	27	24
Pierce	13,100	1,200	9.9	400	800	6.5	95	54	45
Pike	9,200	200	2.4	400	-100	-1.2	121	109	103
Polk	34,000	1,600	4.9	900	600	1.9	43	84	75
Pulaski	8,700	-300	-2.9	100	-400	-4.3	124	146	131
Putnam	12,100	1,800	17.7	700	1,200	11.6	101	26	33
Quitman	2,300	-100	-3.9	100	-100	-6.2	156	150	145
Rabun	10,900	500	4.3	100	300	3.0	109	92	70
Randolph	9,000	-600	-6.2	200	-800	-8.2	122	157	154

(continued)

Table 4 (continued)

County	1987 Population	Population Change 1980-1987 Number	Population Change 1980-1987 Percent	Approx. Natural Increase	Net Migration 1980-1987 Number	Net Migration 1980-1987 Percent	Rankings* 1987 Population	Rankings* Percent Change 1980-1987 Population	Rankings* Net Migration
Richmond	192,800	11,100	6.1	13,300	-2,200	-1.2	6	75	104
Rockdale	49,500	13,000	35.5	2,600	10,400	28.4	28	11	11
Schley	3,600	100	4.2	200	0	0.1	153	97	87
Screven	15,500	1,400	10.1	500	900	6.4	85	52	47
Seminole	8,700	-400	-4.0	300	-600	-6.3	125	151	146
Spalding	54,100	6,200	12.9	2,100	4,100	8.5	23	39	39
Stephens	22,900	1,100	5.1	700	400	2.0	55	83	73
Stewart	5,600	-300	-4.6	100	-400	-7.0	147	153	149
Sumter	29,900	600	1.9	1,500	-900	-3.1	45	111	121
Talbot	7,000	400	6.3	100	300	4.6	140	74	55
Taliaferro	2,000	0	-0.5	0	0	-1.2	159	132	105
Tattnall	18,200	0	0.1	800	-800	-4.2	75	125	130
Taylor	8,000	100	1.0	200	-100	-1.3	130	121	107
Telfair	11,000	-400	-3.8	400	-800	-7.4	107	148	152
Terrell	11,700	-300	-2.6	600	-900	-7.7	105	144	153
Thomas	38,300	200	0.4	2,000	-1,800	-4.8	36	124	137
Tift	34,200	1,300	4.0	2,100	-800	-2.5	41	103	116
Toombs	24,200	1,600	6.9	1,300	300	1.2	52	70	79
Towns	6,600	1,000	17.5	0	1,000	17.7	143	28	18
Treutlen	6,200	100	1.9	200	0	-0.6	145	112	95
Troup	53,500	3,500	7.0	2,100	1,300	2.7	24	68	72
Turner	9,600	100	1.0	500	-500	-4.8	118	122	138
Twiggs	9,700	300	3.2	500	-200	-1.9	116	105	111
Union	11,000	1,600	17.0	100	1,500	16.0	108	30	22
Upson	27,100	1,100	4.3	200	900	3.4	49	93	67
Walker	57,400	900	1.6	1,600	-600	-1.1	22	115	102
Walton	34,900	3,600	11.7	1,800	1,800	5.7	40	45	49
Ware	37,100	-100	-0.2	1,500	-1,600	-4.3	39	128	132
Warren	6,700	100	1.2	200	-100	-1.8	142	118	109
Washington	19,200	300	1.7	800	-400	-2.3	70	113	113
Wayne	22,200	1,400	7.0	1,100	400	2.0	57	69	74
Webster	2,300	-100	-3.8	100	-200	-6.6	157	149	147
Wheeler	5,100	-100	-1.3	100	-200	-3.0	151	137	120
White	12,200	2,100	20.7	300	1,800	17.4	100	20	19
Whitfield	69,700	3,900	6.0	3,900	100	0.2	18	77	85
Wilcox	7,600	-100	-1.5	200	-200	-3.1	133	138	122
Wilkes	11,100	200	1.7	300	-100	-0.9	106	114	99
Wilkinson	10,900	500	4.9	600	0	-0.2	110	85	90
Worth	18,600	600	3.1	1,100	-500	-2.9	74	107	119
Georgia	6,222,000	759,000	13.9	336,000	423,000	7.7			

Note: Individual counties may not add to total due to rounding.

* Rank computed by Division of Research. Counties with identical values are ranked in alphabetical order (see base values).

Source: U.S. Department of Commerce, Bureau of the Census, 1988.

Table 5

Georgia's Ten Highest and Ten Lowest Counties Ranked by 1987 Population and 1980-87 Population Changes

Rank	1987 Population	1980-1987 Change in: Population Number	Population Percentage	Net Migration Number	Net Migration Percentage
1	Fulton	Gwinnett	Gwinnett	Gwinnett	Fayette
2	DeKalb	Cobb	Fayette	Cobb	Gwinnett
3	Cobb	DeKalb	Dawson	DeKalb	Dawson
4	Gwinnett	Fulton	Cherokee	Cherokee	Cherokee
5	Chatham	Cherokee	Camden	Fayette	Camden
6	Richmond	Fayette	Columbia	Fulton	Columbia
7	Muscogee	Columbia	Bryan	Columbia	Forsyth
8	Clayton	Clayton	Forsyth	Douglas	Bryan
9	Bibb	Douglas	Henry	Henry	Henry
10	Dougherty	Chatham	Cobb	Rockdale	Cobb
150	Long	Terrell	Quitman	Terrell	Dade
151	Wheeler	Dade	Seminole	Dooly	Dougherty
152	Baker	Seminole	Clay	Ware	Telfair
153	Schley	Floyd	Stewart	Thomas	Terrell
154	Clay	Macon	Dooly	Richmond	Randolph
155	Echols	Telfair	Glascock	Floyd	Calhoun
156	Quitman	Crawford	Crawford	Muscogee	Dooly
157	Webster	Dooly	Randolph	Liberty	Crawford
158	Glascock	Randolph	Calhoun	Chattahoochee	Liberty
159	Taliaferro	Chattahoochee	Chattahoochee	Dougherty	Chattahoochee

* Rank computed by Division of Research. Counties with identical values are ranked in alphabetical order (see base values in Table 4).

Source: U.S. Department of Commerce, Bureau of the Census, 1988.

The counties making up the Augusta MSA are a study in contrasts. While suburban Columbia County had a net migration of 15,000 new residents, the central county of the MSA — Richmond — lost a total of 2,200 residents due to out-migration. Two other central MSA counties, Muscogee, in the Columbus MSA, and Dougherty, in the Albany MSA, also were among the ten counties experiencing migration losses, dropping 4,000 and 7,100 residents, respectively.

The list of the ten counties with the highest percentage gains from net migration between 1980 and 1987 almost parallels the top ten counties gaining in total population. Again, seven of the top ten counties are in the piedmont, with six of the top percentage gainers in the Atlanta MSA. Dawson County, with the third highest rate of growth from net migration in the state, 54.5 percent, lies on the southern edge of the highlands, and is adjacent to the Atlanta MSA. Fluctuations due to military activity probably are responsible for the high net migration rates in the remaining two coastal counties of Camden and Bryan. Of the ten counties with the largest percentages in net migration losses, nine have lost between 7.1 percent and 15 percent, with Chattahoochee experiencing a net migration loss of 29.2 percent.

CONCLUSION

As the Georgia population continues to grow, it is logical to assume that, given a continuation of the trends exhibited earlier in this decade, a major portion of the growth will

occur in metropolitan areas of the state, concentrating in the piedmont. Furthermore, most of the resident population growth will concentrate in suburban MSA counties, particularly those surrounding Atlanta. The piedmont's large in-migration has resulted in an immediate demand for services geared to new residents, such as new housing and increased electric power. The demographic characteristics of these new residents also suggest a variety of long-term needs, such as improved and expanded schools, hospital facilities, transportation systems, and water and sewage services. Georgia's challenge is to provide the services and resources necessary to support this new population and to make other areas of the state, including non-piedmont MSA counties and regions, economically attractive for new residents.

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Twelfth in a continuing series

Regional Economic Conditions

Hugh O. Nourse and John Drye

The South Central Coastal Plain Region

The South Central Coastal Plain region is located just south of Macon and east of Albany. It borders the Macon, Albany, Southwest Coastal Plain, East Central, Southwest Piedmont, and Southeast regions. Major towns and cities include Oglethorpe, Vienna, Cordele, Fitzgerald, Ashburn, Tifton, Moultrie, Thomasville, and Valdosta. Moody Air Force Base, Abraham Baldwin College, and Valdosta State College also are located here.

The region's largest industrial employers are the food, textile, apparel, lumber and wood products, paper, printing and publishing, fabricated metals, and non-electrical machinery industries (Table 1). Four of these — the food, textiles, apparel, and fabricated metals industries — experienced a low growth in statewide employment between 1980 and 1988. The food industries' employment growth was 4.2 percent while the fabricated metals, textiles and apparel industries suffered declines in statewide employment of 1 percent, 7.8 percent and 8.7 percent, respectively. The largest food processing plant in the area is Sunnyland Foods, which employs over 1,000 workers. Another plant

Table 1

South Central Coastal Plain
Number of Manufacturing Plants by Employment, 1982

	Number of Employees				Plants
Industry	1-19	20-99	100-249	Over 250	Total
Food & kindred products	22	24	4	4	54
Tobacco manufactures	0	0	0	0	0
Textile mill products	3	6	11	4	24
Apparel & other textile products	20	15	19	9	63
Lumber & wood products	142	21	13	1	177
Furniture & fixtures	13	1	1	0	15
Paper & allied products	3	3	1	3	10
Printing & publishing	36	8	0	0	44
Chemicals & allied products	14	8	0	0	22
Petroleum & coal products	2	0	0	0	2
Rubber & misc. plastics products	6	6	2	0	14
Leather & leather products	1	0	0	0	1
Stone, clay, and glass products	23	1	0	0	24
Primary metal industries	2	2	2	1	7
Fabricated metal products	11	19	6	0	36
Machinery, except electrical	38	13	3	0	54
Electric & electronic equipment	3	0	2	1	6
Transportation equipment	9	7	0	1	17
Instruments and related products	1	0	0	0	1
Misc. manufacturing industries	7	1	0	0	8
Total number of plants	356	135	64	24	579

Source: U.S. Department of Commerce, *Census of Manufacturing*, 1982.

employing over 1,000 workers is the Riverdale Apparel Plant in Colquitt County. The lumber and wood products, paper, printing and publishing, and non-electrical machinery industries showed strong statewide employment growth between 1980 and 1988. The employment growth for these industries was 24.5 percent, 11 percent, 62.7 percent, and 30.8 percent, respectively.

The civilian labor force in the region grew at a compounded rate of slightly over 1 percent between 1980 and 1986, but declined 8.7 percent in 1987 (Table 2). The unemployment rate, while ranging from a low of 6.6 percent to a high of 9 percent, averaged 7.7 percent between 1980 and 1987. Total employment declined in 1983, corresponding to the unemployment rate high of 9 percent in the previous year. The relatively high unemployment rate could be associated with the fact that only 42 percent of this area's labor force has a high school education. This compares poorly with the state's educational level overall as 56.4 percent of Georgia's labor force are high school graduates.

Table 2

Civilian Labor Force
South Central Coastal Plain

Year	Employed	Unemployed	Total
1980	142,257	10,497	152,754
1981	143,601	10,824	154,425
1982	141,799	13,980	155,779
1983	141,858	12,932	154,790
1984	146,183	12,082	158,265
1985	148,991	13,640	162,631
1986	153,636	12,667	166,303
1987	141,817	9,996	151,813

Source: Georgia Dept. of Labor, Labor Information System.

The South Central Coastal Plain region forms part of the Valdosta, Macon, and Albany retail trade areas. Sales are influenced by Macon and Valdosta, as Interstate 75 runs through the region's middle, providing easy access to these two markets. The counties which have the greatest dollar volume of retail sales appear to be Lowndes, Thomas, and Tift, probably because Valdosta, Thomasville, and Tifton are located in these counties. The only two large malls in the region are in Tifton and Valdosta.

Residential construction in the region exhibited an upward trend between 1980 and 1983, before declining in 1984 and 1985 (Table 3). In 1986 and 1987 residential construction was relatively stable. Single family units built in these two years, however, were above the average for the whole period. The lower than average total unit construction was caused by declines in multi-family units.

Nonresidential construction was dominated by retail store construction between 1980 and 1987. Retail store construction ranged from a low of $5.2 million in 1981 to a high of $17.7 million in 1982. This sector experienced great volatility between 1980 and 1987; nevertheless, it consistently was at higher levels than industrial and office con-

Table 3

Building Permits
South Central Coastal Plain

	Residential		Value of Construction		
Year	Single Units	Total Units	Industrial	Office	Retail
1980	840	1,233	$8,254,061	$1,561,200	$12,571,775
1981	736	1,301	7,927,470	2,052,055	5,231,856
1982	718	1,639	2,568,767	2,275,381	17,655,147
1983	1,044	2,035	1,395,270	3,011,066	7,401,160
1984	1,064	1,578	8,184,270	2,993,933	12,561,956
1985	845	1,239	4,382,230	4,578,857	16,413,583
1986	1,086	1,336	13,789,010	102,579,212	14,343,575
1987	937	1,120	6,156,269	7,568,205	13,511,837
Annual Average	909	1,435	6,582,168	15,827,489	12,461,361

Source: U.S. Dept. of Commerce, Bureau of the Census.

struction. The high traffic density on I-75 creates an additional retail market that extends beyond local residents, which accounts for the volume of retail construction.

Industrial construction was fairly low during the period. Expenditures ranged from a low of $1.4 million in 1983 to a high of $13.8 million in 1986. A definite downward trend in industrial construction was present between 1980 and 1983. Though the value increased significantly in 1984, it was not sustained into 1985. Industrial construction peaked again in 1986, only to fall by 1987.

Office, bank, and professional buildings construction exhibited an upward trend over the eight years. Values ranged from a low of $1.6 million in 1980 to a high of $102 million in 1986. The high volume of activity in 1986 must represent a special project, and indeed may have accounted for increased employment in the mid 1980s. The decrease in employment in 1987 suggests a lower level of construction activity of all types in 1988 and 1989.

GEORGIA BUSINESS STATISTICS

SERIES	OCT 1988	SEPT 1988	AUG 1988	OCT 1987
Georgia Leading Indicators Index[1] (1969=100)	181.01	176.80	178.62	179.09
Georgia Coincident Indicators Index[2] (1969=100)	559.50	558.85	562.15	567.00
Nonagricultural Employment[2] (thousands)	2,813.8	2,802.7	2,792.9	2,798.4
Manufacturing Employment[2] (thousands)	565.2	563.5	562.7	573.5
Average Weekly Earnings, Manufacturing[2] (dollars)	359.77	357.66	354.32	363.80
Help Wanted Advertising, Atlanta Index[3] (1967=100)	267	256	268	279
Taxable Retail Sales[4] ($ millions)	3,622.9	3,818.3	3,743.4	3,330.2
Building Permits[5]				
Residential Housing Units, Private (thousands)	5.5	4.6	5.7	4.7
Value of Residential Housing ($ thousands)	296,868	277,760	330,669	286,596
Value of Nonresidential Construction ($ thousands)	185,014	225,950	246,353	258,714
Industrial Buildings	19,143	43,401	22,682	28,548
Office, Bank and Other Professional Buildings	16,337	27,603	54,806	34,156
Stores and Other Mercantile Buildings	47,930	46,744	55,528	66,122
Other	101,604	108,202	113,335	129,888
Consumer Price Index[6] (CPI-U, all items)				
South U.S. (1982-84 = 100)	118.2	117.7	117.0	113.8
South/Population more than 1,200,000[a]	118.9	118.7	118.0	114.8
South/Population 450,000 - 1,200,000[a]	119.5	118.6	117.8	114.4
South/Population 50,000 - 450,000[a]	117.1	116.4	115.9	112.8
South/Population Less than 50,000[a]	116.0	116.0	115.3	112.2
Atlanta (1982-84=100)[b]	119.1[c]	–	–	115.5[c]
Prices Received by Farmers, Georgia Index[7] (1977=100)	136[r]	143[r]	140	121
	1988:II	1988:I	1987:IV	1987:II
Total Personal Income[8] ($ millions)	93,703	92,371	92,416	87,833

[1] Georgia Economic Forecasting Project, Division of Research, College of Business Administration, University of Georgia. Initial monthly values subject to revision.

[2] Labor Information Systems, Georgia Department of Labor.

[3] Series published by The Conference Board, Inc.

[4] Derived by the Division of Research, College of Business Administration, University of Georgia, from data of the Sales and Use Tax System, Georgia Department of Revenue.

[5] U.S. Department of Commerce, Bureau of the Census.

[6] U.S. Department of Labor, Bureau of Labor Statistics, Southeastern Regional Office.

[7] Georgia Department of Agriculture, Georgia Crop Reporting Service.

[8] U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System.

[a] Group size revised as of January 1, 1987; indexes revised to 1982-84=100 base as of January, 1988.

[b] Atlanta index is average of each 6 months of the calendar year; base revised to 1982-84=100 as of January 1, 1988.

[c] Data are for 1st half, 1988, and first half, 1987, respectively.

[r] Revised.

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GEORGIA BUSINESS AND ECONOMIC CONDITIONS

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A Decade of Growth: Foreign Investment and Georgia in the Mid-80s

Suzanne A. Lindsay

Since 1978, the United States has been the single largest recipient of foreign direct investment. Foreign-owned or controlled assets climbed rapidly during the early 1980s; by the end of 1987 they were valued at $262 billion, according to the Bureau of Economic Analysis (BEA) of the U.S. Department of Commerce. The forces behind the rapid expansion of foreign investment in the United States in the late 1970s and into the 1980s have been both political and economic. Factors identified by the BEA include:

- Investment by foreign multinational corporations seeking political stability, economic vigor, and/or a large market, and more sure of their competitive position vis-a-vis U.S. firms;
- Investment in new facilities (or acquisition of existing U.S. firms) to avoid the threat of increased U.S. protectionism;
- Investment to acquire U.S. firms that have grown with the U.S. economy, and now offer attractive earnings ;
- Availability of U.S. firms or operations because of corporate reorganizations and subsequent "spin-offs";
- Reinvestment of earnings plus foreign-parent borrowing by existing U.S. affiliates, spurred by relatively high interest rates in this country;
- Depreciation of the U.S. dollar against foreign currencies, which has both lowered the cost in foreign currencies of investing in new or existing U.S. companies and facilities, and also encouraged production in the U.S. by making U.S. imports more expensive in dollars; and
- Active pursuit of foreign investment by state and local governments, particularly in the South.

The importance of the last factor — and the success of what might be called the "southern strategy" — is clear: From 1977 through 1986, twelve southeastern states garnered a substantial share of foreign non- banking affiliates' investment. Georgia's growth in foreign-affiliate employment and assets, although still lagging that of the regional leader, Florida, in 1986, was well above rates for both the U.S. as a whole, and many neighboring states. To attract both domestic and foreign investment, Georgia has developed an extensive marketing program, which includes active advertising and publicity campaigns, and the operation of foreign offices in Seoul, Tokyo, Brussels, and Toronto. The state also offers a number of industrial incentives to all domestic and foreign businesses, ranging from help in choosing a location, employee training and other services, a variety of financial arrangements extending from bond financing to loan guarantees, and limited tax exemptions, to assistance in manufacturing and marketing products (see box on page 6).

In addition to BEA data, surveys by the Georgia Department of Industry and Trade and private business show the outcome of such efforts in current investment and employment levels. Because the various surveys have different designs and cover different periods, however, they must be considered separately.

INVESTMENT BY FOREIGN NON-BANKING AFFILIATES

Using a benchmark study prepared for 1980 and annual sample-based surveys for earlier and later years, the BEA has estimated that employment by foreign-owned non-banking U.S. affiliates (business enterprises in which a single foreigner owns or controls ten percent or more of corporate voting securities or an equivalent interest in unincorporated enterprises) stood nationally at 1,218,711

in 1977 and a preliminary 2,964,492 in 1986, an increase of 143.2 percent. During the same period, foreign-affiliate employment in the Southeast (including Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North and South Carolina, Tennessee, Virginia, and West Virginia), rose from 264,648 to 739,930 (or by 179.6 percent), moving the area from second-ranked among BEA regions to first place (Table 1).

Georgia's non-banking foreign-affiliate employment grew from 30,693 to 109,003 (255.1 percent) over the ten years, raising it from eleventh to ninth among all states. On a year-to-year basis, jobs provided by foreign affiliates grew rapidly from 1977 through 1981, leveled off during 1982, expanded steadily during 1983-85, and slowed again in 1986 (Figure 1). In 1977, these jobs represented about 1.6 percent of total nonagricultural employment in Georgia; by 1986, they represented almost 4.1 percent. How much of the additional employment was newly created is uncertain, since no data are available on the number of jobs that simply shifted from " U.S.-owned " to "foreign affiliate" when an existing firm was acquired by foreign investors.

ASSETS AND ACREAGE

Nominal growth in gross assets, including land, mineral rights, and all property, plant, and equipment, of foreign affiliates was very rapid, amounting to 375.6 percent for the U.S., 361.6 percent for the Southeast, and 454.5 percent for Georgia over 1977-86. Because the decade included periods of rapid inflation, real growth was substantially less, but Georgia's relative position among states rose from 14th to ninth, while the Southeast retained its first place among regions.

Foreign affiliates also expanded their holdings of land and mineral rights. In 1977, such firms owned an estimated 2,036,000 acres in the Southeast; ten years later, they owned 4,823,000 acres, an increase of 135.7 percent. In Georgia, land ownership rose from 292,000 acres in 1977 to 782,000 in 1986, ranking the state seventh nationally in both years, and increasing by 167.8 percent. The ownership or leasing of mineral rights in Georgia rose by 288 percent, although the acreage involved remained quite small (Table 1), especially compared to the leading states, North Dakota (over 3 million acres owned or leased in 1986), and Texas (over 2.4 million acres).

NON-BANKING INVESTMENT BY COUNTRY

Table 2 indicates the employment and number of affiliates with property, plant, and equipment in Georgia, for each separately estimated area or country. Foreign-affiliate employment increased by 99 percent or better for each country over 1977-1986, but relative shares shifted. Canada provided 16.5 percent of employment in 1977 and 19.4 percent in 1986; all European countries together accounted for 67.4 percent of affiliates' employment in 1977 but only 59.2 percent ten years later. Foreign affiliates of the United Kingdom remained Georgia's single largest source of related employment, but their share fell from 35 percent in 1977 to 22.5 percent in 1986. The employment shares of Germany, the Netherlands, and Switzerland rose; those of France fell. Japan's share also fell slightly, from 7.2 percent of non-banking affiliate employment to 6.7 percent, while the share of Latin American countries as a group rose from 1.3 percent to 5.4 percent. Data for the British Commonwealth countries of Australia, New Zealand, and South Africa are not available for 1977; in 1986 the three countries provided 3.6 percent of foreign affiliate employment. The shares of other African, Asian, and Pacific countries remained stable and very small.

The number of non-banking foreign affiliates with property, plant, and equipment in Georgia also grew for each area and country. The total rose from 358 in 1977 to 1,093 in 1986, an increase of over 200 percent. European countries provided a majority of such affiliates in 1977 (almost 61 percent) and still more (67.9 percent) in 1986. Germany's foreign affiliates grew the most rapidly, expanding from 51 to 231, and from 14.2 percent of the total in 1977 to 21.1 percent in 1986. The only geographic areas with lower numbers of affiliates with property, plant and equipment were the other African, Asian, and Pacific

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Table 1

Foreign Direct Investment: Rankings of the Southeast and Georgia, 1977 and 1986

Measure of Investment[1]	1977 Value	1977 Rank[2]	1986 Value	1986 Rank[2]	Percentage Change, 1977-1986
Southeast					
Employees (Thou.)	264,648	2	739,930	1	179.6
Gross Assets ($ Mil.)[3]	15,777	1	72,755	1	361.1
Land Owned (Thou. acres)	2,046	1	4,823	1	135.7
Mineral Rights Owned/Leased (Thou. acres)	3,361	4	6,850	3	103.8
Georgia					
Employees (Thou.)	30,693	11	109,003	9	255.1
Gross Assets ($ Mil.)[3]	1,553	14	8,611	11	454.5
Land Owned (Thou. acres)[4]	292	7	782	7	167.8
Mineral Rights Owned/Leased (Thou. acres)[5]	25	34	97	34	288.0

[1]Data apply to non-banking U.S. affiliates of foreign companies, which are business enterprises in which a single foreign person owns or controls, directly or indirectly, 10 percent or more of the voting securities if the business enterprise is incorporated, or an equivalent interest if it is unincorporated. Values for 1986 are preliminary.

[2]Rankings and percentage changes determined by the Division of Research, College of Business Administration, University of Georgia, on the basis of published values. Regional rankings do not include data for the District of Columbia (except for employment), Alaska or Hawaii, or the value of withheld or minimum-estimate data.

[3]Includes the gross book value of land, mineral rights, and all other property, plant, and equipment wherever carried in the balance sheet.

[4]State rank based on data for 46 states in 1977(values for three states were withheld and for one state, was less than 500 acres) and all states in 1986.

[5]State rank based on data for 41 states in 1977(three states withheld; six states less than 500 acres) and 43 states (three states withheld; four states less than 500 acres) in 1986.

Source: Based on U.S. Department of Commerce, Bureau of Economic Analysis, Foreign Direct Investment in the United States: Operations of U.S. Affiliates, 1977-80, Tables D 13,D-35,F-7; Ned G. Howenstine, U.S. Affiliates of Foreign Companies: Operations in 1986, Survey of Current Business, Vol. 68, No. 5 (May, 1988), Table 13.

nations, numbering only five in 1988, and affiliates whose country of *ultimate* beneficial ownership is in fact the United States (two in 1988).

By country, European-owned foreign affiliates held the largest share of acreage in Georgia, 595,000 acres or 88.3 percent of the total in 1986, representing an increase of 196 percent since 1977. The withholding of data to insure the confidentiality of individual companies blurs land-ownership data; however, Germany's foreign affiliates increased their holdings from 14,000 acres to 93,000 (564.3 percent), the Netherlands, from 2,000 to 41,000 (up almost 2,000 percent), and Switzerland, from 5,000 to 29,000 acres (by 480 percent). By 1986, affiliates of the United Kingdom held the largest separately reported acreage, accounting for 110,000 acres, or 14.1 percent of the total. Japan owned only 2,000 acres, or 0.3 percent of land in the hands of all foreign non-banking affiliates.

INDUSTRIAL COMPOSITION OF FOREIGN INVESTMENT

Relatively little data on the distribution of foreign affiliates' land ownership by industry are available, since detailed information for such cross-classifications by state

Figure 1

was not collected in the 1986 survey. In 1977, affiliates engaged in agriculture, forestry, and fishing owned a little over 16 percent (47,000 acres) of the total acreage held by non-banking foreign affiliates. Affiliates engaged in real estate held another 3.8 percent (11,000 acres). By 1986, separate data for the 782,000 acres in foreign-affiliate ownership were available only for affiliates engaged in wholesale trade (0.5 percent, or 4,000 acres) and real estate (261,000 acres, or 33.4 percent). The latter represents an increase of 2,272.7 percent and perhaps the most notable surge in foreign investment activity. The BEA warns that these data may not be entirely representative, since industry classifications at the state level are based on an affiliate's U.S. operations as a whole, and the affiliate's activities in a given state may differ from its national pattern.

Foreign affiliates' employment by industry repeats a picture of substantial growth in all sectors, with insurance, finance (except banking, which is not tracked in the BEA studies), and retail trade growing particularly rapidly from 1977 to 1986 (Table 3). Manufacturing as a whole grew less rapidly, but provided almost 49 percent of foreign affiliates' employment in 1986. Two industries, machinery and primary and fabricated metals, showed very large percentage increases over 1977-1986. Foreign affiliates manufacturing metals and chemicals and allied products remained the largest employers among manufacturing industries for which separate data were available in 1986.

The importance of Georgia's foreign affiliates' employment to total employment still is relatively small overall; in 1986, employment for affiliates as a group represented 4.9 percent of the state's annual average nongovernmental, nonagricultural employment (Table 3). Estimated percentages for specific industries ranged from a low of 1.1 percent for finance, except banking (low partly because it is estimated on a base *including* banking) and 1.2 percent for residual "other industries", to a high of just over 50 percent for the chemicals and allied products industry. Even allowing for differences in definition between data sources, it is apparent that foreign affiliates have a considerable impact on employment in several sectors of Georgia's economy.

AFFILIATES BY SIZE

Although 45.5 percent of Georgia's foreign affiliates with property, plant, and equipment reported values of less than

Table 2

Foreign-Affiliate Employment and Investment in Georgia by Country*, 1977 and 1986

Country	Foreign Affiliate Employment				Affiliates with Property, Plant, Equipment (No.)			
	1977	1986	% Change, 1977-86	% of Total 1986	1977	1986	% Change 1977-86	% of Total 1986
All Countries	30,693	109,003	255.1	100.0	358	1,093	205.3	100.0
Canada	5,066	21,113	316.8	19.4	49	107	118.4	9.8
Europe	20,697	64,529	211.8	59.2	218	742	240.4	67.9
France	2,568	5,117	99.3	4.7	26	47	80.8	4.3
Germany	2,534	9,317	267.7	8.5	51	231	352.9	21.1
Netherlands	2,231	9,589	329.8	8.8	25	77	208.0	7.0
United Kingdom	10,736	24,535	128.5	22.5	54	186	244.4	17.0
Switzerland	539	4,454	726.3	4.1	25	91	264.0	8.3
Japan	2,224	7,318	229.0	6.7	46	111	141.3	10.2
Australia, New Zealand, South Africa	(D)	3,912	NA	3.6	7	19	171.4	1.7
Latin America	400	5,911	1377.8	5.4	24	48	100.0	4.4
Middle East	(D)	2,345	NA	2.2	5	41	720.0	3.8
Other Africa, Asia, and Pacific	128	479	274.2	0.4	6	5	-16.7	1.6
United States	245	3,396	1286.1	3.1	3	2	-33.3	0.7

* Indicates country of ultimate beneficial ownership.
(D) Data supressed to avoid disclosure of data of individual companies.
NA Percentage not available because of surpressed data.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Foreign Direct Investment in the United States: Operations of U.S. Affiliates, 1977-80, Table D-37; Foreign Direct Investment: Operations of U.S. Affiliates of Foreign Companies, Preliminary 1986 Estimates, Table D-37. Percentages computed by Division of Research.

$1 million for such assets in 1986, the most rapidly growing class by size of assets contained affiliates with property assets of $50 million and over. The group increased by 550 percent over 1977-86, rising from 1.7 percent of the total in 1977 to 3.6 percent in 1986. With 449 affiliates, the $1 million-$10 million asset group was the largest in 1986, with 41.1 percent of all affiliates reported (Table 4). In general, as the number of affiliates has grown, their distribution also has shifted toward higher-value size classes; inflation of property values over the decade undoubtedly has been one factor in such changes.

FOREIGN FACILITIES IN 1988: A CURRENT PROFILE

Since the BEA's direct foreign investment reports generally lag by several years, and are limited to non-banking affiliates, the Georgia Department of Industry and Trade's annual survey of international facilities in Georgia offers the most current profile of foreign investment in the state. In 1976, the survey found 218 international facilities; by 1988, it listed 1,261 (see Figure 2). Reported voluntarily by foreign firms operating in Georgia, the data have undergone some changes in methodology over time, and also cannot be compared directly to those prepared by the BEA's "affiliate" definition. In general, a "facility" is a place of business enterprise owned wholly or partly by an affiliate of a foreign country. A single company thus may report several facilities, and each is counted separately. A particular business

Georgia's Industrial Incentives shown on next page

Article and tables continued on page 15

GEORGIA'S INDUSTRIAL INCENTIVES

LOCATION

- Modern, reasonably-priced industrial park sites.
- New industrial shell buildings ready for completion to client's specifications.
- Comprehensive state inventory of all available industrial sites and buildings.
- Economic profiles on all major Georgia towns.
- Three Foreign (or Free) Trade Zones, located in Atlanta, Brunswick and Savannah.

LABOR

- Labor market area profiles for all 159 Georgia counties.
- Free employee recruiting and screening.
- Free employee training prior to plant start-up.
- Free employee upgrading and training for plant expansions.

FINANCE

- Industrial revenue bond financing for land, buildings, and equipment.
- Local development corporations (over 200 throughout the state) that assist in securing local bank and U.S. Small Business Administration loans.
- Georgia Business Development Corporation loans for qualified companies unable to obtain conventional financing.
- U.S. Economic Development Administration loan guarantees available in the majority of Georgia's counties.
- Farmer's Home Administration industrial loan guarantees.
- Statewide tax increment financing for redevelopment projects.
- Small Business Revitalization Program to help small businesses secure long term financing.
- Georgia Development Authority low interest agribusiness loans.

TAX EXEMPTIONS

- Inventory: Exemption available in two-thirds of state's counties.
- Sales: Exemptions on all manufacturing machinery used directly in production; on air/water pollution control machinery and equipment; and on solar energy machinery and equipment.
- Property: Annual exemptions on air/water pollution control equipment and on certain inventory imported by water and in transit.

MARKETING AND MANUFACTURE

- Computerized trade lead program to help Georgia companies increase product exports.
- Product marketing assistance through government-produced manufacturing and international trade directories.
- Single point-of-contact for all state environmental regulations.
- Area Planning and Development Commissions knowledgeable about growth potentials in their areas.
- Twelve field offices of the Georgia Tech Research Institute offering technical assistance to industry.
- Sixteen Small Business Development Centers offering counseling, training and economic development studies.
- Start-up space and research assistance for high technology operations.

Note: All incentives apply to both domestic and foreign firms.

SOURCE: Georgia Department of Industry and Trade, October 1988.

Last in a continuing series

Regional Economic Conditions

Hugh O. Nourse and John Drye

The Albany and Southwest Coastal Plain Regions

The Albany region consists of Dougherty and Lee counties and includes the city of Albany. Industrial employment appears to be concentrated in the food, lumber and wood products, paper, printing and publishing, and non-electrical machinery industries (Table 1). The food products industry was the only major employer which did not experience significant growth in statewide employment between 1980 and 1988. Its employment growth for this period measured 4.2 percent. Only one food products plant, Miller Brewing, located in Dougherty County, employs over 1,000 workers.

The lumber and wood products, paper, printing and publishing, and non-electrical machinery industries' statewide employment growth was significant between 1980 and 1988. Employment in these industries increased 24.5 percent, 11 percent, 62.7 percent and 30.8 percent, respectively. Like the Miller Brewing Company, the Procter &

Table 1

Albany Region
Number of Manufacturing Plants by Employment, 1982

	Number of Employees				Plants
Industry	1-19	20-99	100-249	Over 250	Total
Food & kindred products	4	8	0	4	16
Tobacco manufactures	0	0	0	0	0
Textile mill products	1	0	0	2	3
Apparel & other textile products	1	0	1	1	3
Lumber & wood products	12	2	0	0	14
Furniture & fixtures	2	1	0	0	3
Paper & allied products	2	0	1	2	5
Printing & publishing	12	1	2	0	15
Chemicals & allied products	2	3	0	1	6
Petroleum & coal products	0	0	0	0	0
Rubber & misc. plastics products	1	1	0	1	3
Leather & leather products	0	0	0	0	0
Stone, clay, and glass products	3	1	0	0	4
Primary metal industries	0	0	0	0	0
Fabricated metal products	5	2	0	0	7
Machinery, except electrical	9	1	0	1	11
Electric & electronic equipment	1	1	0	1	3
Transportation equipment	1	1	0	0	2
Instruments and related products	2	0	0	0	2
Misc. manufacturing industries	1	0	0	1	2
Total number of plants	59	22	4	14	99

Source: U.S. Department of Commerce, *Census of Manufacturing*, 1982.

Gamble Paper Plant in Dougherty County also employs over 1,000 workers.

The region's civilian labor force unemployment rate experienced sharp fluctuations between 1980 and 1987 (Table 2), ranging from a high of 10.9 percent to a low of 7.6 percent during this period. Unemployment averaged 9 percent between 1981 and 1987. Since the region lacks a highly trained labor force (only 56.5 percent of it has a high school education), the closing of the Firestone Tire/Rubber Plant significantly affected employment here. Residential construction in the Albany region fluctuated around an average 615 units per year between 1980 and 1987. During this period, residential construction ranged from a low of 445 units in 1981 to a high of 814 units in 1986. Nonresidential construction was dominated by retail store construction between 1980 and 1987 (Table 3). Retail store construction ranged from a low of $2.5 million in 1981 to a high of $6.7 million in 1987.

On the other hand, industrial construction in the region averaged around $1.5 million annually between 1980 and 1987. Office, bank, and professional buildings construction fared slightly better, accounting for an annual average of $2 million over the same time period. Levels ranged from a low of $.71 million in 1982 to a high of $3.3 million in 1983. These levels of construction activity and high unemployment make Albany one of the slowest growing metropolitan areas in Georgia.

Table 2

Civilian Labor Force
Albany

Year	Employed	Unemployed	Total
1980	46,555	3,811	50,366
1981	47,642	4,064	51,706
1982	47,382	4,754	52,136
1983	46,481	5,137	51,618
1984	48,544	4,475	53,019
1985	50,370	4,883	55,253
1986	50,259	6,161	56,420
1987	48,776	4,958	53,734

Source: Georgia Dept. of Labor, Labor Information System.

The Southwest Coastal Plain region lies in the extreme southwestern portion of Georgia. It encompasses Schley, Sumter, Stewart, Webster, Randolph, Terrell, Clay, Calhoun, Baker, Early, Mitchell, Seminole, Decatur, Grady, Miller, and Quitman counties. Major cities and towns include Americus, Dawson, Shellman, Arlington, Pelham, Bainbridge, Richland, and Cairo. Georgia Southwestern College is also located in this region.

The area's major employers are the food, apparel, lumber and wood products, printing and publishing, and non-electrical machinery industries (Table 4). Although employment growth for the food and apparel industries was minimal between 1980 and 1988, the lumber and wood products, printing and publishing, and non-electrical machinery industries made strong gains. The lumber and wood products industry dominates employment in this region as it

Table 3

Building Permits
Albany

	Residential		Value of Construction		
Year	Single Units	Total Units	Industrial	Office	Retail
1980	532	696	$3,100,839	$1,515,813	$4,872,764
1981	389	445	1,068,781	1,384,000	2,450,437
1982	259	496	641,807	705,757	3,399,503
1983	389	637	459,085	3,284,977	5,604,822
1984	376	791	1,093,665	2,340,072	4,406,254
1985	406	580	565,992	3,167,219	4,278,761
1986	399	814	1,810,225	1,706,395	5,350,138
1987	345	463	3,497,022	1,945,154	6,729,840
Annual Average	387	615	1,529,677	2,006,173	4,636,565

Source: U.S. Dept. of Commerce, Bureau of the Census.

Table 4

Southwest Coastal Plain
Number of Manufacturing Plants by Employment, 1982

Industry	Number of Employees 1-19	20-99	100-249	Over 250	Plants Total
Food & kindred products	10	7	3	1	21
Tobacco manufactures	0	0	0	0	0
Textile mill products	0	0	0	1	1
Apparel & other textile products	5	3	13	6	27
Lumber & wood products	133	17	3	1	154
Furniture & fixtures	2	5	1	0	8
Paper & allied products	1	0	0	1	2
Printing & publishing	17	4	0	0	21
Chemicals & allied products	9	4	1	1	15
Petroleum & coal products	1	0	0	0	1
Rubber & misc. plastics products	2	3	1	1	7
Leather & leather products	0	1	0	0	1
Stone, clay, and glass products	12	2	0	0	14
Primary metal industries	2	1	0	0	3
Fabricated metal products	8	4	0	0	12
Machinery, except electrical	13	8	1	1	23
Electric & electronic equipment	3	1	0	2	4
Transportation equipment	1	0	2	0	3
Instruments and related products	0	0	0	0	0
Misc. manufacturing industries	4	0	0	0	4
Total number of plants	223	60	25	15	323

Source: U.S. Department of Commerce, *Census of Manufacturing*, 1982.

accounts for 48 percent of the manufacturing plants.

As Table 5 shows, the civilian labor force unemployment rate was very volatile between 1980 and 1987, ranging from a high of 9.1 percent to a low of 6.8 percent, and averaging 7.9 percent between 1980 and 1987. Total employment has actually declined 3.4 percent over the whole period. The educational level of this region's labor force is relatively low, as only 38.9 percent of its labor force has a high school education, compared to the 56.4 percent rate for Georgia as a whole.

The Southwest Coastal Plain region forms part of the Macon, Columbus, Albany, Dothan, and Valdosta retail trade areas. Sales in the region are dominated by the Albany metropolitan area. The only large shopping mall in this sixteen- county region is located in Decatur County.

Residential construction fluctuated sharply between 1980 and 1987 (Table 6). Total unit residential construction reached a high of 467 units in 1982 then bottomed out at 216 units in 1983, with an annual average of 336 units. The decline in residential construction is more evident here than

Table 5

Civilian Labor Force
Southwest Coastal Plain

Year	Employed	Unemployed	Total
1980	68,678	5,124	73,802
1981	70,504	5,129	75,534
1982	69,100	6,900	76,000
1983	68,809	6,739	75,548
1984	70,306	5,658	75,964
1985	70,569	6,796	77,365
1986	73,104	6,410	79,514
1987	65,953	5,334	71,287

Source: Georgia Dept. of Labor, Labor Information System.

Table 6

Building Permits
Southwest Coastal Plain

Year	Residential		Value of Construction		
	Single Units	Total Units	Industrial	Office	Retail
1980	269	361	$ 923,200	$ 474,000	$1,132,561
1981	204	402	618,354	664,700	1,236,217
1982	161	467	775,500	959,596	1,140,535
1983	139	216	1,992,251	654,268	1,261,089
1984	174	442	4,229,081	399,125	3,286,777
1985	141	276	2,462,000	586,245	5,413,375
1986	163	221	641,098	1,052,250	3,470,002
1987	134	299	284,000	484,000	2,366,750
Annual Average	173	336	1,490,686	659,273	2,413,413

Source: U.S. Dept. of Commerce, Bureau of the Census.

in the rest of the state.

Industrial construction was fairly low during this same period, averaging $1.5 million annually. Office, bank, and professional buildings construction also exhibited low growth from 1980 through 1987. The value of office construction ranged from a low of $.5 million in 1984 and 1987 to a high of around $1 million in 1982 and 1986. Low levels of construction are associated with the low growth in the labor force and the lack of urban areas in this region. Retail store construction was stronger, climbing from a low $1.1 million in 1980 to a high of $5.4 million in 1985, then dropping back to $2.4 million by 1987. Given current national trends in construction and local business conditions, however, it is unlikely that construction activity will rebound in this region until after 1989.

Recent Real Estate Developments

Lina Echeverri

Preliminary data for 1988 show an overall total of 15,440 housing units authorized by permit, which is a .2 percent drop from the permits issued in Georgia in 1987. Market performance during the last three months of the year altered the forecasts made in the first half of 1988. After dropping 1, 2.8, and 13.8 percent, respectively, permits rebounded in the last quarter, increasing 24.2 percent above their value a year before.

Market performance also differed in the metropolitan areas. Table 1 provides quarterly and annual figures of total private housing units authorized by permit in the MSAs and the state. Figures for Augusta and Columbus correspond to total metropolitan area values, as opposed to number of permits issued in the Georgia portion of the MSA. In the last three months of 1988, Albany, Athens, Augusta, Macon-Warner Robins, and Savannah issued fewer permits than in

Table 1

Private Housing Units Authorized

	Albany	Athens	Atlanta	Augusta	Columbus	Macon*	Savannah	State
1980	696	NA	22,058	1,667	576	1,145	1,152	34,837
1981	445	713	18,596	1,185	382	840	1,245	29,996
1982	496	780	24,015	2,258	560	1,255	1,839	38,737
1983	637	1,937	44,460	3,578	1,499	2,662	2,381	65,910
1984	791	1,322	50,131	4,265	1,122	2,083	1,754	70,264
1985	580	1,571	50,103	5,311	1,437	1,764	2,761	73,141
1986	814	1,490	53,557	5,132	1,175	2,251	2,614	76,896
1987	463	1,157	44,300	2,478	1,342	1,954	2,332	64,217
I	69	232	11,263	635	730	401	413	15,713
II	82	323	10,919	675	276	489	698	18,441
III	109	226	12,033	491	169	428	601	17,632
IV	203	376	10,085	677	167	636	620	12,431
1988	193	1,321	44,504	2,171	926	1,579	1,581	64,113
I	63	408	10,978	506	211	375	379	15,560
II	61	288	12,339	561	285	598	463	17,916
III	49	454	10,155	622	252	370	393	15,197
IV	20	171	11,032	482	178	236	346	15,440
% CHANGE ON AN ANNUAL BASIS								
1987- 1988								
I	-58.3	14.2	0.5	-12.4	-31.0	-19.2	-32.2	-0.2
II	-8.7	75.9	-2.5	-20.3	-71.1	-6.5	-8.2	-1.0
III	-55.0	100.9	-15.6	26.7	49.1	-13.6	-34.6	-13.8
IV	-90.1	-54.5	9.4	-28.8	6.6	-62.9	-44.2	24.2

* Figures for 1980 - 1983 correspond to the former definition of the Macon MSA. As of June 30, 1983, the Macon MSA added Peach County, deleted Twiggs County, added Warner-Robins as a central city, and changed title to Macon-Warner Robins MSA.

Note: Quarterly totals may not add to annual figures because of revisions in monthly data.

Source: U.S. Department of Commerce, Bureau of the Census, *Housing Units Authorized by Permit Issuing Places* and unpublished reports.

the same period the year before. The number of housing units authorized by permit rose 9.4 percent in Atlanta and 6.6 percent in Columbus.

Year-to-year comparisons show a similar pattern. Only Atlanta and Athens showed gains of .5 and 14.2 percent, respectively, in the number of permits issued during 1988. The other metropolitan areas issued fewer permits in 1988 than in 1987.

Atlanta continues to dominate the housing market in Georgia. Figure 1 shows the share of the market for Atlanta and for all the MSAs (excluding Chattanooga) over the last five years. Of the total number of permits authorized in the state, 69.4 percent were issued in Atlanta. The rest of the MSAs combined account for 12.1 percent of the total housing units authorized.

Table 2 provides annual information on the value of private housing units authorized by permit. While these numbers give a general overview of the market, they do not report value per square foot, which is the genuine indicator of housing market performance.

A large proportion of total permits issued in Georgia correspond to single units authorized by permit. In 1988, these accounted for 68.2 percent of the total number of permits issued in the state. Figure 2 shows the total number of permits issued in Georgia compared to single permits in the Atlanta MSA since 1980. Total permits declined 13.8 percent in 1981, then rose consistently through 1986 when they reached an overall high of 76,896 units authorized. During 1987 and 1988, the total number of permits issued in Georgia declined 16.7 percent from the 1986 peak. Single permits followed this same pattern. They increased from 1981 to 1986, when single permits reached an overall high of 50,705 single housing units authorized. Atlanta issues the largest number of single permits in the state. In 1988, it had 28,518 single units authorized by permit or 64.4 percent of the number of single units authorized in Georgia.

A different aspect of the housing industry consists of sales of existing single family homes. The National Association of Realtors publishes the quarterly and annual seasonally adjusted figures found in Table 3. Quarter-to-quarter changes show a mixed performance. After a 9.4 percent increase in the first quarter of 1988, existing home sales dropped for two consecutive periods at rates of 2.1 and 10.9 percent, respectively. Though sales increased 13.6 percent in the last quarter of 1988, the rebound was not enough to offset the slowdown that occurred during the rest of the year, so total annual sales dropped 4.3 percent.

Mobile home shipments also fluctuated, as Table 4 shows. Quarterly totals show gains of 1.5 and 13.5 percent, respectively, during the first two quarters of the year. This pattern was reversed in the second half of 1988, when shipments dropped 5.6 and 14.6 percent, respectively, each

Figure 1
MSAs as Percentage of Georgia

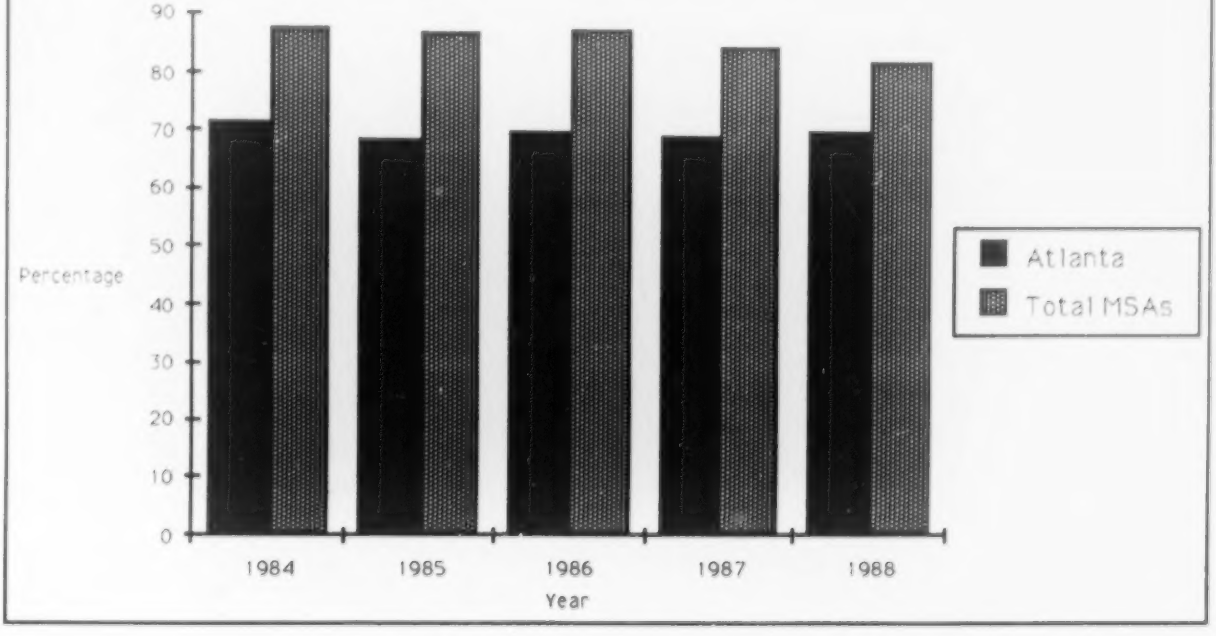


Table 2

Value of Private Housing Units Authorized
(Thousands of Dollars)

	Albany	Athens	Atlanta	Augusta	Columbus	Macon	Savannah	State
1980	$21,802	NA	$746,102	$52,073	$19,573	$38,811	$46,572	$1,166,333
1981	12,492	$20,071	648,789	39,378	14,845	30,364	51,765	1,018,380
1982	12,562	23,096	931,925	65,415	89,748	44,690	66,530	1,387,196
1983	18,279	56,613	1,625,171	120,311	50,961	86,300	73,252	2,367,445
1984	24,862	46,503	2,151,672	149,394	40,978	83,734	97,505	2,896,777
1985	22,062	63,381	2,195,968	190,521	52,169	77,901	136,264	3,130,037
1986	30,053	65,802	2,787,739	247,258	51,710	103,452	158,993	3,868,204
1987	18,952	70,268	2,710,717	158,410	57,362	98,985	151,485	3,722,607
1988	9,421	79,523	2,708,217	143,322	46,348	84,339	119,637	3,771,217

Note: Quarterly totals may not add to annual figures because of revisions in monthly data.

Source: U.S. Depent of Commerce, Bureau of the Census, *Housing Units Authorized by Permit Issuing Places* and unpublished reports.

Figure 2

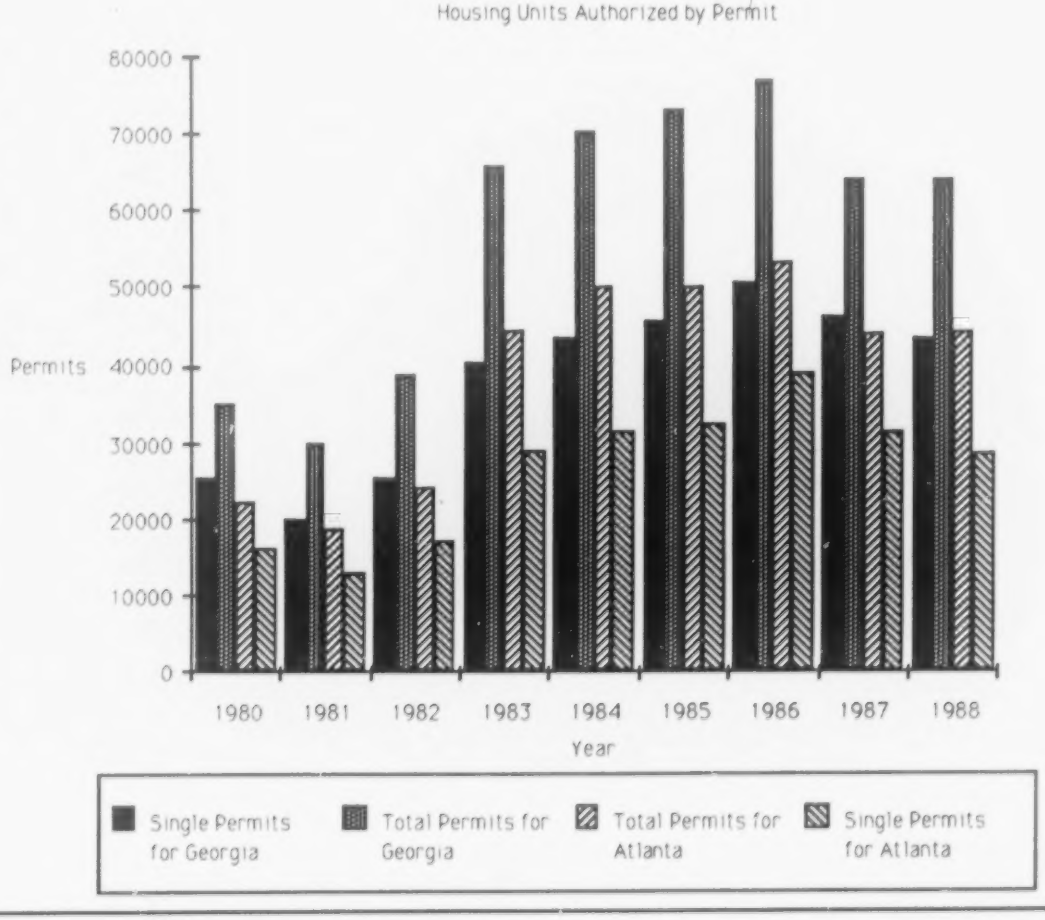


Table 3

Existing Home Sales in Georgia for Single Family, Apartment Condos, & Co-ops (000s of units)

Year	Annual Totals	Quarterly Totals I	II	III	IV
1983	51.0	47.8	48.3	51.1	57.1
1984	60.1	65.9	63.9	51.1	58.7
1985	65.1	68.8	63.0	58.4	70.3
1986	75.1	71.8	70.9	78.4	83.7
1987	89.0	80.1	104.9	89.7	81.1
1988	85.2	88.7	86.8	77.3	87.8

*Note: Quarterly figures are seasonally adjusted annual rates.

Source:
National Association of Realtors, "Existing Home Sales," and Annual Home Sales Supplement, December 1988.

Table 4

Mobile Home Shipments to Georgia

Year	Annual Totals	Quarterly Totals I	II	III	IV
1983	16,268	3,297	4,401	4,226	3,794
1984	18,486	4,174	4,695	4,621	4,425
1985	20,199	4,995	5,640	5,180	4,384
1986	16,774	4,661	4,536	3,995	3,582
1987	14,797	3,373	3,797	4,040	3,587
1988	14,612	3,424	4,309	3,815	3,064

Note: Quarterly totals may not add to annual totals because of revisions in monthly data.

Source: National Conference of States on Building Codes and Standards.

quarter. Overall, mobile home shipments were off by 1.3 percent in 1988.

The housing sector has been declining steadily in the last two years, and if interest rates continue to climb, this trend may persist. The result will be a slowdown in the demand for new and existing homes triggered by higher mortgage rates. Fear of inflation affects the housing market as well, although prices in this sector rise at a slower pace than the overall change in the consumer price index. The CPI for all urban consumers increased by 4.4 percent in each of the last two years while the index of prices for the housing industry rose 3.7 and 4.0 percent, respectively, in 1987 and 1988.

Table 3

Employment of Non-Banking Foreign Affiliates, Georgia, by Industry, 1977 and 1986 Compared to Georgia's Employment by Industry, 1986

Industry	Employment of Affiliates 1977	Employment of Affiliates 1986	% Change, 1977-86	% of Total, 1986	Georgia Emp., 1986 Ann. Avg.	% of Georgia Emp., 1986 Ann. Avg.
All industries[1]	30,693	109,003	255.1	100.0	2,210,200	4.9
Mining	(D)	537	NA	0.5	8,200	6.5
Petroleum	408	1,596	291.2	1.5	NA	NA
Manufacturing	19,423	53,327	174.6	48.9	564,600	9.4
Food, kindred products	2,304	5,350	132.2	4.9	60,600	8.8
Chemicals, allied products	3,461	9,710	180.6	8.9	19,300	50.3
Primary, fabricated metals	1,488	8,795	491.1	8.1	36,900	23.8
Machinery[2]	1,881	9,668	414.0	8.9	55,100	17.5
Other manufacturing	10,289	19,804	92.5	18.2	322,000	6.2
Wholesale trade	4,207	8,622	104.9	7.9	196,000	4.4
Retail trade	3,368	20,109	497.1	18.4	471,700	4.3
Finance, except banking[3]	98	719	633.7	0.7	66,500	1.1
Insurance	700	6,224	789.1	5.7	46,800	13.3
Real estate	335	1,211	261.5	1.1	32,800	3.7
Other industries	(D)	16,658	NA	15.3	1,447,200	1.2

[1] Excludes government employment from Georgia base.

[2] Includes electrical equipment.

[3] Includes banking employment in Georgia base.

(D) Data suppressed to avoid disclosure of data for individual firms.
NA Percentage unavailable because of withheld data

Note: All data for an affiliate are shown in the single industry in which the affiliate was classified based on its U.S. operations as a whole. The affiliate's activity in Georgia may differ from that of its U.S. operations as a whole.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Foreign Direct Investment in the United States: Operations of U.S. Affiliates, 1977-80, Table F-7; Foreign Direct Investment: Operations of U.S. Affiliates of Foreign Companies, Preliminary 1986 Estimates, Table F-7.; Georgia Department of Labor, Georgia Labor Market Trends, Vol. XIII, No. 12 (Annual Issue). Subtotals and percentages computed by Division of Research.

Table 4

Foreign Affiliates with Property, Plant, and Equipment, Georgia, by Size Class, 1977 and 1986

Size Class	Number of affiliates 1977	1986	% Change, 1977-86	% of Total, 1986
Total with property, plant,equipment	358	1,093	205.3	100.0
Under $50 thousand	103	170	65.0	15.6
$50,000-under $1 million	127	327	157.5	29.9
$1 million-under $10 million	102	449	340.2	41.1
$10 million-under $50 million	20	108	440.0	9.9
$50 million and over	6	39	550.0	3.6

Note: A given affiliate is counted once in each state in which it has property, plant, and equipment.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Foreign Direct Investment in the United States: Operations of U.S. Affiliates, 1977-80, Table D-23; Foreign Direct Investment: Operations of U.S. Affiliates of Foreign Companies, Preliminary 1986 Estimates, Table D-23. Percentages computed by Division of Research.

facility may include a number of functions, including manufacturing, distribution, warehousing, wholesale or retail sales, administration, or research, but will be counted only once no matter how many functions it serves.

In 1988, the GDIT found that Japan had the highest number of facilities, 259, with the United Kingdom second at 201, followed by Germany, Canada, and the Netherlands (see Table 5). Together, the top five nations accounted for 69.3 percent of all facilities in Georgia, and fourteen countries accounted for almost 95 percent of the total. Altogether, 38 nations maintained facilities in the state, with total employment of 82,008. Canada's facilities led with 19,251 jobs (23.5 percent), followed by the United Kingdom, Japan, Germany, and the Netherlands. Together, the five top foreign employers accounted for 76 percent of total jobs, and countries with over ten facilities apiece provided over 97 percent of all employment in foreign-owned facilities.

Cumulative announced investment by foreign countries, as of October 1988, amounted to almost $7.2 billion. Australia led with $1.8 billion (24.9 percent of the total), followed closely by Canada ($1.7 billion, or 24.6 percent). Japan's cumulative investment also exceeded $1 billion. The top countries in number of facilities provided an even larger share, 99 percent, of all announced investment in the state.

MANUFACTURING FACILITIES

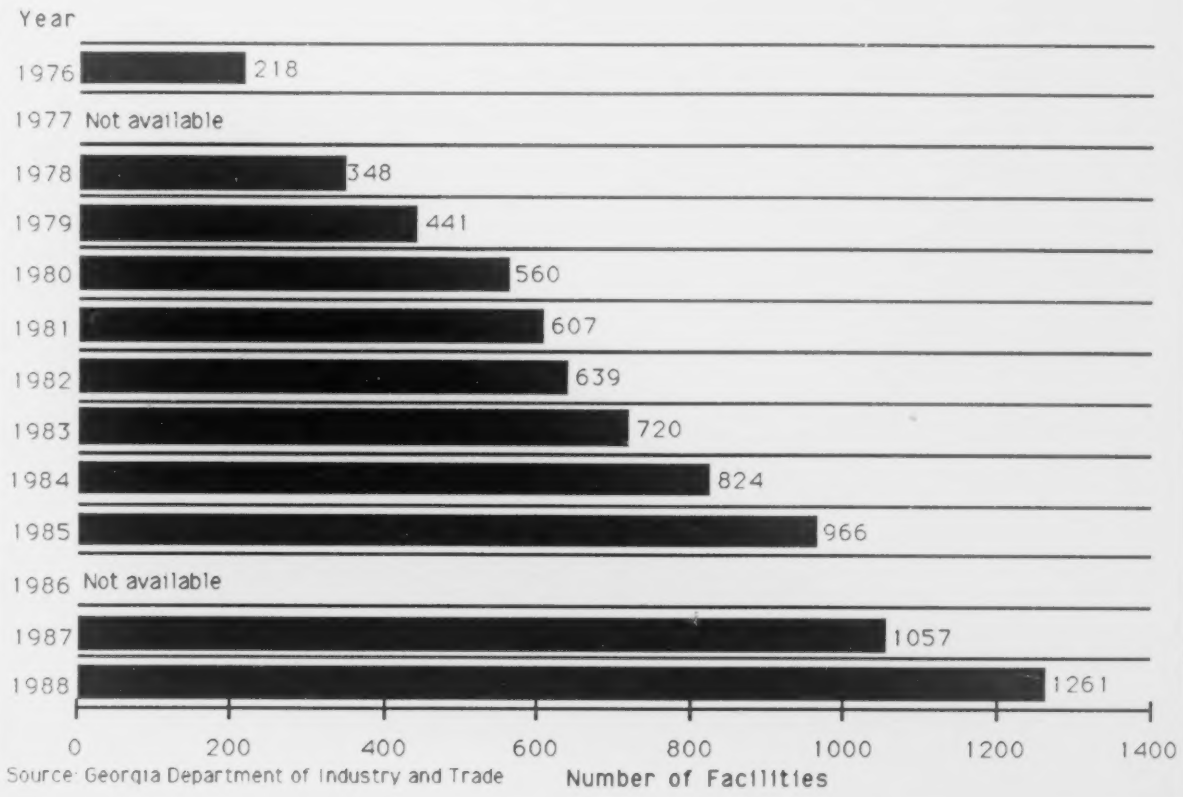
As Table 6 illustrates, manufacturing facilities comprised only about 27 percent (339 facilities) of all foreign-owned facilities in 1988, but provided 57 percent of associated employment, or 46,752 jobs. The top three foreign employers in manufacturing accounted for over 64 percent of the employment, and included the United Kingdom with 11,175 jobs, Canada which provided 9,573 jobs, and Japan with 9,450 jobs. Germany, Australia, the Netherlands, France, Switzerland, Sweden,and Belgium each provided over 1,000 jobs in manufacturing facilities; with the top three, they accounted for 94 percent of all such jobs in 1988.

DISTRIBUTION OF FOREIGN-OWNED FACILITIES

The Georgia Department of Industry and Trade does not publish employment tabulations for sub-state geographic areas, but an examination of the facilities listed in 1988 reveals distinct geographic patterns. Over 88 percent of all facilities reported were located in the 38 metropolitan counties of the state. The concentration of facilities in the Atlanta MSA , especially in Fulton, Cobb, Gwinnett, and DeKalb counties, and increasingly, Clayton County, mirrors the overall economic and population patterns of the state. Altogether, however, over a third of all counties in the state had attracted foreign facilities by 1988. Although the number of facilities outside metropolitan areas remained relatively small (about 11 percent), the success of nonmetropolitan counties such as Hall, Whitfield, Troup, Habersham, Thomas, Lowndes, Polk, Ware, and Crisp in attracting foreign-owned investment indicates both the attractive-

Figure 2

International Facilities in Georgia, 1976-88



Source: Georgia Department of Industry and Trade

ness of the state as a whole, and the efforts of nonmetropolitan counties to welcome foreign investors.

The concentration of foreign-owned facilities in Georgia's metropolitan areas applies to most countries represented in the state. Many of the facilities owned by Japan, the United Kingdom, Germany, Canada, and the Netherlands are concentrated in the central Atlanta area, but each country also has invested in facilities located well away from Georgia's largest cities. The logic of locating administrative, distribution, sales, and research facilities in or near urban areas and transportation hubs is clear; given access to markets and adequate labor supplies, however, many of Georgia's nonmetropolitan counties are competing successfully for manufacturing facilities in particular.

Georgia's attractiveness as a site for administrative operations has been documented in a continuing survey by the KPMG Peat Marwick accounting firm, which in 1988 interviewed 283 foreign firms with U.S. headquarters in Georgia. Each firm was at least 50 percent owned by a foreign-based entity, and its Georgia-based management reported directly to a foreign parent company. KPMG Peat Marwick found that half of the firms had begun operations in Georgia within the preceding five years, and about 77 percent of the headquarters were located in the central Atlanta counties of Cobb, DeKalb, Fulton, and Gwinnett. Fulton County had the largest share of the estimated 30,900 jobs provided in Georgia by foreign- owned U.S.headquarters. The surveyed firms already had invested over $2.5 billion in property, plant, and equipment in Georgia; 51 percent planned to expand their operations in 1988, with an expected additional capital investment of $422 million.

CONTINUING GROWTH IN FOREIGN INVESTMENT: SOME ISSUES

KPMG Peat Marwick's study found that unlike previous surveys, which identified immigration and education as the questions most frequently mentioned by managers of Georgia's headquarters facilities, current U.S. trade policies and the impact of changes in the value of the U.S. dollar on profits were the two top issues. Immigration remained the third most frequent area of concern, followed by labor quality and availability, education, and other specific issues, such as federal and state tax systems, product liability,

Table 5

Major International Investments in Georgia, By Country, 1988

Country	Number of Facilities	% of total Facilities	Total Employment	% of total Employment	Cumulative Announced Investment ($ Mil.)	% of Announced Investment
Total	1,261	100.0	82,008	100.0	7,164.1	100.0
Japan	259	20.5	14,572	17.8	1,203.5	16.8
United Kingdom	201	15.9	15,733	19.2	783.1	10.9
Germany	161	12.8	6,806	8.3	248.4	3.5
Canada	137	10.9	19,251	23.5	1,759.3	24.6
Netherlands	116	9.2	5,873	7.2	559.2	7.8
France	80	6.3	3,995	4.9	124.2	1.7
Sweden	60	4.8	2,232	2.7	67.6	0.9
Switzerland	41	3.3	3,279	4.0	215.3	3.0
Australia	38	3.0	3,270	4.0	1,784.0	24.9
Belgium	37	2.9	2,691	3.3	55.0	0.8
Finland	25	2.0	1,196	1.5	113.7	1.6
Italy	22	1.7	585	0.7	166.9	2.3
Denmark	14	1.1	194	0.2	1.0	0.0
Taiwan	10	0.8	197	0.2	11.0	0.2
Other Countries*	60	4.8	1,994	2.4	70.3	1.0

* Includes individual values for countries with ten or more facilities, and combined totals for facilities and employment of 24 additional countries. Investment totals include data for eight additional countries.

Source: Georgia Department of Industry and Trade, Georgia International Facilities, 1988 (November,1988); press release, Announced International Capital Investment in Georgia, (October, 1988). Percentages computed by Division of Research.

U.S. business practices, air service and its cost, worker's compensation laws, and personal and family questions.

Such concerns indicate some of the factors that will continue to affect Georgia's ability to attract and retain foreign investment. Recent newspaper reports note that foreign investors need a solid base of knowledge about a state and its suitability for their operations, and sometimes may choose to purchase existing firms near the largest U.S. markets, rather than building new facilities in less populated areas. Questions about the availability of trained and trainable labor and the quality of local education are important; so is a sense of community acceptance and welcome, especially to Japanese investors. The concentration of foreign facilities in central metropolitan areas and along major transportation corridors indicates the continuing role played by an extensive transportation network. "Quality of life" considerations — which may vary among investors — will continue to influence the choice of a specific location in Georgia, even after the state has won the national and regional battle for selection. If Georgia's successful pursuit of foreign investment is to continue, the sum of these factors must be positive for each investor — no small task for the state and its citizens in the 1990s.

Table 6

International Manufacturing Facilities and Employment in Georgia, by Leading Countries, 1988

Country	Manufacturing Facilities	% of total Facilities by Country	Manufacturing Facilities as % of All Facilities	Manufacturing Employment	% of Total Employment by Country	Manufacturing Employment as % of All Employment
Total	339	100.0	26.9	46,752	100.0	57.0
United Kingdom	96	28.3	47.8	11,175	23.9	71.0
Japan	60	17.7	23.2	9,450	20.2	64.9
Canada	50	14.7	36.5	9,573	20.5	49.7
Germany	40	11.8	24.8	2,861	6.1	42.0
France	18	5.3	22.5	2,331	5.0	58.3
Australia	16	4.7	42.1	2,528	5.4	77.3
Netherlands	13	3.8	11.2	1,546	3.3	26.3
Sweden	11	3.2	18.3	1,527	3.3	68.4
Switzerland	7	2.1	17.1	2,134	4.6	65.1
Belgium	4	1.2	10.8	1,020	2.2	37.9
Italy	4	1.2	18.2	370	0.8	63.2
Austria	4	1.2	57.1	455	1.0	96.8
Finland	3	0.9	12.0	969	2.1	81.0
Ireland	3	0.9	50.0	198	0.4	96.1
Israel	2	0.6	28.6	302	0.6	85.3
Yugoslavia	2	0.6	66.7	47	0.1	62.7
Other Countries*	6	1.8	25.0	NA	NA	NA

NA Not available

* Includes individual values for countries with two or more manufacturing facilities, and combined values for facilities and employment for six additional countries with one facility each.

Source: Georgia Department of Industry and Trade, Georgia International Facilities, 1988 (November, 1988). Percentages computed by Division of Research

Taxable Sales in Georgia, 1987-1988,
by Industry and County
($000)

Industry	Total 1987	Total 1988	Annual Percent Change 1987-1988	Industry	Total 1987	Total 1988	Annual Percent Change 1987-1988
Food	13,655,270	14,319,411	4.9	Total Retail	41,885,064	44,502,680	6.2
Apparel	1,651,575	1,762,336	6.7				
Genl. Merch.	8,381,496	8,870,294	7.1	Lumber, Const.	4,757,013	4,702,033	-1.2
Automotive	10,512,632	11,101,523	5.6	Services	5,029,309	5,408,837	7.5
Furniture	3,797,772	4,243,008	11.7	Manufacturing	4,001,571	4,409,927	10.2
Miscellaneous	3,986,319	4,206,109	5.5	Utilities	8,034,995	8,181,179	1.8
County				County			
Appling	108,872	123,088	13.1	Dade	63,464	65,118	2.6
Atkinson	23,739	26,662	12.3	Dawson	36,501	42,395	16.1
Bacon	105,542	125,788	19.2	Decatur	243,595	269,347	10.6
Baker	9,296	9,370	0.8	DeKalb	6,978,067	7,216,419	3.4
Baldwin	247,633	265,715	7.3	Dodge	80,690	81,991	1.6
Banks	46,853	45,683	-2.5	Dooly	74,609	75,419	1.1
Barrow	219,448	223,900	2.0	Dougherty	1,179,117	1,205,160	2.2
Bartow	400,379	426,677	6.6	Douglas	553,358	602,984	9.0
Ben Hill	116,183	123,539	6.3	Early	147,591	170,042	15.2
Berrien	89,065	104,374	17.2	Echols	2,117	2,646	25.0
Bibb	1,678,175	1,859,300	10.8	Effingham	109,434	105,707	-3.4
Bleckley	41,390	43,149	4.2	Elbert	137,185	137,782	0.4
Brantley	43,673	47,491	8.7	Emanuel	122,469	134,263	9.6
Brooks	47,471	51,768	9.1	Evans	99,222	108,512	9.4
Bryan	91,608	95,031	3.7	Fannin	106,299	109,804	3.3
Bulloch	285,722	308,150	7.8	Fayette	299,433	333,600	11.4
Burke	93,841	98,337	4.8	Floyd	770,047	817,784	6.2
Butts	134,586	147,801	9.8	Forsyth	370,429	415,228	12.1
Calhoun	18,637	18,951	1.7	Franklin	146,985	150,632	2.5
Camden	156,619	172,246	10.0	Fulton	10,565,073	11,069,368	4.8
Candler	68,297	73,414	7.5	Gilmer	110,957	117,820	6.2
Carroll	568,510	643,494	13.2	Glascock	4,306	6,040	40.3
Catoosa	310,663	320,949	3.3	Glynn	781,264	839,045	7.4
Charlton	41,344	42,068	1.8	Gordon	280,882	303,204	7.9
Chatham	2,852,009	2,843,337	-0.3	Grady	127,799	137,445	7.5
Chattahoochee	16,061	16,503	2.8	Greene	79,009	80,527	1.9
Chattooga	154,047	133,495	-13.3	Gwinnett	3,874,184	4,292,517	10.8
Cherokee	426,064	418,067	-1.9	Habersham	273,325	275,879	0.9
Clarke	909,363	988,919	8.7	Hall	1,076,285	1,103,807	2.6
Clay	9,118	11,544	26.6	Hancock	25,746	26,645	3.5
Clayton	2,023,343	2,131,121	5.3	Haralson	132,243	142,969	8.1
Clinch	42,544	42,467	-0.2	Harris	108,844	125,201	15.0
Cobb	5,240,886	5,464,499	4.3	Hart	158,102	161,260	2.0
Coffee	255,406	256,815	0.6	Heard	17,970	19,372	7.8
Colquitt	304,520	320,883	5.4	Henry	302,297	320,029	5.9
Columbia	260,371	260,292	0.0	Houston	630,076	651,163	3.3
Cook	100,509	97,780	-2.7	Irwin	39,091	43,663	11.7
Coweta	395,038	419,366	6.2	Jackson	327,706	358,394	9.4
Crawford	17,289	18,027	4.3	Jasper	34,872	36,880	5.8
Crisp	202,889	213,390	5.2	Jeff Davis	134,891	163,451	21.2

Continued

Taxable Sales in Georgia, 1986-1987,
by Industry and County (continued)
($000)

County	Total 1987	Total 1988	Annual Percent Change 1987-1988	County	Total 1987	Total 1988	Annual Percent Change 1987-1988
Jefferson	136,204	146,598	7.6	Richmond	1,961,865	2,039,207	3.9
Jenkins	43,628	45,229	3.7	Rockdale	505,170	536,890	6.3
Johnson	26,970	28,022	3.9	Schley	19,045	18,570	-2.5
Jones	86,512	94,138	8.8	Screven	85,725	86,490	0.9
Lamar	73,829	81,008	9.7	Seminole	75,572	78,868	4.4
Lanier	28,657	30,133	5.2	Spalding	452,303	469,466	3.8
Laurens	363,694	424,183	16.6	Stephens	211,298	201,759	-4.5
Lee	20,723	22,692	9.5	Stewart	21,370	21,330	-0.2
Liberty	216,551	222,549	2.8	Sumter	247,543	242,695	-2.0
Lincoln	29,603	30,461	2.9	Talbot	23,739	46,748	96.9
Long	8,983	7,374	-17.9	Taliaferro	5,359	4,447	-17.0
Lowndes	761,586	797,661	4.7	Tattnall	104,172	106,132	1.9
Lumpkin	88,604	95,704	8.0	Taylor	150,954	166,915	10.6
Macon	79,537	77,577	-2.5	Telfair	58,033	60,778	4.7
Madison	44,272	48,285	9.1	Terrell	50,513	51,501	2.0
Marion	19,639	20,926	6.6	Thomas	370,470	388,915	5.0
McDuffie	143,505	161,984	12.9	Tift	333,421	355,922	6.7
McIntosh	54,782	58,298	6.4	Toombs	215,339	232,910	8.2
Meriwether	134,574	141,214	4.9	Towns	61,058	66,976	9.7
Miller	34,812	36,223	4.1	Treutlen	20,915	19,690	-5.9
Mitchell	131,710	134,494	2.1	Troup	565,046	626,572	10.9
Monroe	113,794	107,584	-5.5	Turner	45,243	50,174	10.9
Montgomery	21,540	20,967	-2.7	Twiggs	23,836	50,408	111.5
Morgan	107,548	103,880	-3.4	Union	74,375	70,966	-4.6
Murray	138,045	150,377	8.9	Upson	158,528	164,979	4.1
Muscogee	1,805,117	1,878,308	4.1	Walker	327,561	324,690	-0.9
Newton	265,108	284,979	7.5	Walton	290,894	309,889	6.5
Oconee	55,543	70,655	27.2	Ware	303,261	303,952	0.2
Oglethorpe	34,365	37,373	8.8	Warren	23,000	21,617	-6.0
Paulding	196,478	214,180	9.0	Washington	163,231	193,810	18.7
Peach	123,384	132,708	7.6	Wayne	233,159	224,732	-3.6
Pickens	186,174	211,020	13.3	Webster	4,975	4,858	-2.4
Pierce	63,965	67,831	6.0	Wheeler	19,757	22,579	14.3
Pike	25,603	29,148	13.8	White	135,231	156,505	15.7
Polk	197,805	205,118	3.7	Whitfield	1,197,355	1,255,507	4.9
Pulaski	41,749	43,123	3.3	Wilcox	20,212	20,425	1.1
Putnam	75,370	77,508	2.8	Wilkes	109,954	111,544	1.4
Quitman	7,609	7,238	-4.9	Wilkinson	65,674	161,081	145.3
Rabun	92,888	94,252	1.5	Worth	83,239	91,241	9.6
Randolph	46,560	48,951	5.1	Georgia	63,707,951	67,204,656	5.5

Note: Figures rounded to the nearest thousand dollars.

Source: Derived by the Division of Research, College of Business Administration, University of Georgia, from data of the Sales and Use Tax System, Georgia Department of Revenue. Sales include the value of all taxable items, as reported by firms selling or acquiring them, plus penalties and interest collected.

GEORGIA BUSINESS STATISTICS

SERIES	DEC 1988	NOV 1988	OCT 1988	DEC 1987
Georgia Leading Indicators Index[1] (1969=100)	179.5	179.0	177.5	175.9
Georgia Coincident Indicators Index[2] (1969=100)	615.7	607.6	608.3	588.9
Nonagricultural Employment[2] (thousands)	2,949.9	2,929.5	2,918.0	2,864.4
Manufacturing Employment[2] (thousands)	569.8	571.7	573.1	581.1
Average Weekly Earnings, Manufacturing[2] (dollars)	370.09	362.34	361.42	366.76
Help Wanted Advertising, Atlanta Index[3] (1967=100)	262	276	267	275
Taxable Retail Sales[4] ($ millions)	4,485.9	3,659.0	3,622.9	4,158.8
Building Permits[5]				
Residential Housing Units, Private (thousands)	4.7	5.1	5.5	3.6
Value of Residential Housing ($ thousands)	276,179	260,148	296,868	220,863
Value of Nonresidential Construction ($ thousands)	239,227	261,156	185,014	228,380[p]
Industrial Buildings	32,336	12,548	19,143	19,322
Office, Bank and Other Professional Buildings	87,312	40,651	16,337	94,588
Stores and Other Mercantile Buildings	41,694	27,622	47,930	32,397
Other	77,885	180,335	101,604	82,073
Consumer Price Index[6] (CPI-U, all items)				
South U.S. (1982-84 = 100)	118.5	118.3	118.2	114.0
South/Population more than 1,200,000[a]	119.2	118.9	118.9	114.9
South/Population 450,000 - 1,200,000[a]	119.7	119.6	119.5	114.5
South/Population 50,000 - 450,000[a]	117.6	117.4	117.1	112.8
South/Population Less than 50,000[a]	116.3	116.3	116.0	112.6
Atlanta (1982-84=100)[b]	121.7[c]	–	–	117.5[c]
Prices Received by Farmers, Georgia Index[7] (1977=100)	129	131	136[r]	117
	1988:III	**1988:II**	**1988:I**	**1987:III**
Total Personal Income[8] ($ millions)	97,227	95,143	92,447	89,820

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[1] Georgia Economic Forecasting Project, Division of Research, College of Business Administration, University of Georgia. Initial monthly values subject to revision.

[2] Labor Information Systems, Georgia Department of Labor.

[3] Series published by The Conference Board, Inc.

[4] Derived by the Division of Research, College of Business Administration, University of Georgia, from data of the Sales and Use Tax System, Georgia Department of Revenue.

[5] U.S. Department of Commerce, Bureau of the Census.

[6] U.S. Department of Labor, Bureau of Labor Statistics, Southeastern Regional Office.

[7] Georgia Department of Agriculture, Georgia Crop Reporting Service.

[8] U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System.

[a] Group size revised as of January 1, 1987; indexes revised to 1982-84=100 base as of January, 1988.

[b] Atlanta index is average of each 6 months of the calendar year; base revised to 1982-84=100 as of January 1, 1988.

[c] Data are for 2nd half, 1988, and 2nd half, 1987, respectively.

[p] Imputation greater than 25%.

[r] Revised.

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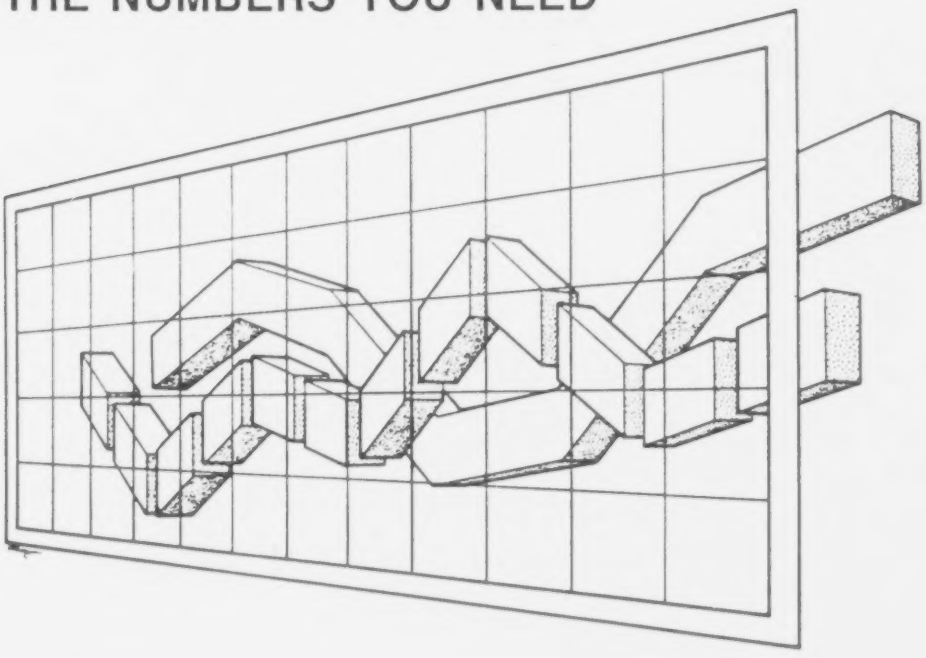

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GEORGIA BUSINESS AND ECONOMIC CONDITIONS

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Education in Georgia: the Arithmetic of QBE

Marie McGrath Libbey

Education in Georgia is, and will remain, an economic priority. In courting industry, a community can use its investment in excellent public schools as an economic drawing card; however, an inadequately and poorly- funded public school system may seriously undercut a community's most valiant effort to attract industry. No tax-cut incentive, improved highway transportation system or natural resource can completely compensate for a poorly educated workforce. Without educated employees prepared to operate sophisticated machinery, process complex computer-generated data, and communicate effectively with technical personnel, a community may have few advantages with which to entice prospective employers or industrial developers. The 1985 passage of the Quality Basic Education Act in Georgia marked both a recognition of education's economic importance and a firm commitment by state leaders and legislators to improve its quality.

This article examines changes in the cost of education over the 1980s. It analyzes Georgia's educational commitment in two ways. First, what is the state's national and regional position? In particular, how has Georgia improved its education system within the nation and compared to other southern states? Second, what changes have occurred within the state's educational structure? Data from school years 1983-84 and 1987-88, (before and after the passage of QBE) offer some answers.

STATE COMPARISONS

The 1980s have brought the nation's critical educational needs into painful focus. National concern about the problems of illiteracy, high school dropouts and plummeting test scores has resulted in a universal effort to increase the quality of education. Georgia's attempt to reform its educational system comes at a time when many other states and regions also are enacting legislation and funding initiatives to upgrade and improve their own educational programs. While great strides have been made, there is much to be corrected. The ambitious programs recently begun will require continued and increasing funding and political support if they are to succeed.

The base data used in this analysis are from the "State Education Performance Chart", a state-by-state collection of statistics and data published annually by the U.S. Department of Education. The listing is used to compare and contrast student performances, resource inputs, state reforms and related population characteristics throughout the U.S. Due to methodological differences, the statistical data provided in this source are valid for interstate comparisons with its definition, but are not compatible with the county and state data used in the latter part of this article.

In 1982, the U.S. average current expenditure per pupil was $2,726 (see Table 1). By 1987, this figure had risen to $3,977 per pupil, an increase of 45.9 percent or $1,251 per pupil. In the Southeast, the 1987 expenditure of $3,115 per pupil reflects a 46.9 percent or $994 per pupil increase above the 1982 figure. Georgia's current expenditure per pupil is still below the national average, but increased by 67.1 percent, or $1,355 over the five-year period, growth well above the national and regional averages.

Between 1982 to 1987, Georgia climbed from 44th to 39th in the national rankings, placing it fourth among the twelve southeastern states, up from seventh in 1982. In 1982, current expenditure per pupil in Georgia was at 74.1 percent of the national average; this figure rose to 84.8 percent by 1987. None of the twelve southeastern states had current expenditures per pupil at levels equaling the national average; only Florida, West Virginia, and Virginia had current expenditures per pupil higher than 95 percent of the 1987 national average. The 1987 southeastern average current expenditure per pupil increase of 46.9 percent represents a percentage gain slightly higher than the national average, but the actual dollar amount remains 20.5 percent below the national figure. In spite of substantial increases in per pupil expenditures, the twelve southeastern states as a region spent only 78.3 percent of the national average in

current expenditures per pupil.

Large increases in reported dollars spent for education are newsworthy, but inflation is a tempering fact. Table 2 reports data for current expenditures per pupil and average teacher salaries, adjusted by the Consumer Price Index, All Urban Consumers (CPI-U), computed on the July 1 through June 30 fiscal year basis utilized by most school districts. After discounting for inflation, Georgia increased its current expenditures per pupil by 41.4 percent, compared to U.S. and regional average growth of 23.4 percent and 24.3 percent, respectively.

Salaries and related personnel costs comprise the major component of educational budgets, with the average teacher's salary a prime indicator of support to education. Table 1 also details average teacher salaries in the U.S. and the southeastern states for 1982 and 1988 (estimated). While the twelve-state region as a whole still pays an average teacher's salary only slightly above 84 percent of the national average, state rankings have shifted considerably, with most repositionings due to changing state economies.

The energy crisis earlier in this decade correlates closely with relatively lower average teacher's salaries and a drop in the national rankings of the oil-dependent economy of Louisiana, for example. Rapidly growing populations in the service-oriented economies of Georgia, Florida, and Virginia propelled these states ahead in both national and regional rankings. Higher national rankings for eight of the twelve southeastern states reflect the general upturn of the regional economy.

At $26,190 per annum, the average 1988 teacher's salary in Georgia represents an increase of $9,827, or 60.1 percent, over its 1982 level. This is the highest percentage increase in the region and is only slightly below Virginia's absolute increase of $10,185 for the same period. Adjusted for inflation over the six years, the average teacher's salary in Georgia grew by 30 percent , compared to national and regional inflation-adjusted increases of 18.1 percent and 17.6 percent, respectively.

GEORGIA BUSINESS AND ECONOMIC CONDITIONS

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COUNTY COMPARISONS

While state-to-state comparisons are useful tools to review national trends and track regional changes, individual local school systems remain the basic components of an improved public school system. Reformation of Georgia's public school system began with an examination into the gross inequities of costs and funding existing among the individual school systems. Financial inequities were rooted in a funding scheme based upon the amount of each system's taxable property. Under the financing program known as the Adequate Program for Education in Georgia (APEG), state support was not entirely dependent on, nor necessarily greatly reflective of, the number of students to be served or the type of programs provided by individual school systems.

The great diversity of system size and resource availability throughout the 187 individual systems yielded tremendous differences in the types and quality of educational opportunities offered within Georgia. With the enactment of the Quality Basic Education Act in 1985, Georgia launched an ambitious plan to reform and upgrade all aspects of its state public school education program. Included in QBE was a legislated commitment to provide a financial structure ensuring each public school student in Georgia of the opportunity to receive a quality basic education.

Base data for local system analysis are from unpublished reports provided by the Georgia Department of Education. Except for the ADA data in Appendix 1, individual expenditure figures for a few counties will differ slightly from final reports due to the use of preliminary data in this analysis. Rankings, groupings and calculations have been computed by the Division of Research. Expenditures by function and receipts-per-child by source for the school years 1983-84 and 1987-88 were compared to view change over time. To examine the state and individual school systems from a common point of reference, data were compared on the basis of Average Daily Attendance (ADA). Dollar amounts reporting cost-per-child data for expenditures by function and by receipt source will differ

Table 1

Current Expenditures Per Pupil and Average Teacher Salaries, U.S., Southeast, and Georgia

	Current Expenditures Per Pupil (Dollars)				Average Teacher Salary (Dollars)			
			National Rank				National Rank	
	1987	1982	1987	1982	1988[e]	1982	1988	1982
United States	3,977	2,726	—	—	28,008	19,274	—	—
Southeast*	3,115	2,121	—	—	23,591	16,300	—	—
Alabama	2,573	2,063	49	43	23,320	15,612	41	45
Arkansas	2,733	1,841	46t	50	20,340	14,506	50	50
Florida	3,794	2,443	25	34	25,198	16,780	28	36
Georgia	3,374	2,019	39t	44	26,190	16,363	26	41
Kentucky	2,733	1,906	46t	47	24,253	17,290	35	32
Louisiana	3,069	2,590	44	30	21,209	17,930	48	28
Mississippi	2,350	1,706	51	51	20,562	14,135	49	51
North Carolina	3,129	2,107	41	42	24,900	16,947	29	35
South Carolina	3,237	1,907	40	46	24,403	15,615	34	44
Tennessee	2,827	1,895	45	48	23,785	16,285	39	42
Virginia	3,780	2,384	28	36	27,193	17,008	23	34
West Virginia	3,784	2,593	27	29	21,736	17,129	45	33

* Average values computed by Division of Research.

t Tied ranking.

[e] Estimated.

Source: State Education Performance Chart: Student Performance, Resource Inputs, State Reforms, and Population Characteristics, 1982 and 1988, U.S. Department of Education, Office of Planning, Budget and Evaluation, Washington, D.C., 1989.

slightly and should not be combined with each other.

How has the state system, as a whole, been changed by the enactment of QBE? How has QBE affected receipts and functional expenditures per child within individual county and independent school systems? It is too early in the life of QBE to compare students' test performance on a state or school system basis, but the effects of the new QBE funding formulas should appear in state and local per-child funding distributions and resources.

SYSTEM SIZE

Georgia's current public education system includes 159 county systems and 27 independent city systems. The total, 186 systems, is one less than the 1983-84 count, resulting from the 1987 consolidation of the West Point independent system into the Troup county system. Georgia's ADA has grown by 5.6 percent, or over 55,000 students, between the school years ending in 1984 and 1988. During this period, county-wide systems grew by 7 percent, or 59,297 students, while independent city systems lost a total of 4,259 students, or 3.3 percent of their 1983-84 ADA population; losses in the Atlanta independent system alone accounted for 77.8 percent of the drop. Data from the National Education Association show Georgia's public school population growing at a considerably faster rate than the U.S. average; the U.S. total ADA increased 1.7 percent, from 36.5 million in 1984 to 37.1 million in 1988.

Table 3 indicates that the size of local school systems varies widely, with slight changes in the distribution of system size occurring over the five-year period. In 1988, the ten largest and ten smallest systems parallel those of 1984, with only one change in the twenty largest systems. The ten largest systems accounted for approximately 40 percent of the state ADA in both 1984 and 1988; these same systems also were responsible for 47 percent of the increase in the total state ADA. Between 1983-84 and 1987-88 the student

Table 2

Average Teacher Salary and Current Expenditures Per Pupil,
Nominal and Inflation Adjusted Dollars, U.S., Southeast, and Georgia

	Current Expenditures Per Pupil			Average Teacher Salary		
	1987	1982	Pct. Inc.	1988	1982	Pct. Inc.
			(Nominal Dollars)			
United States	3,977	2,726	45.9	28,008	19,274	45.3
Southeast*	3,115	2,121	46.9	23,591	16,300	44.7
Georgia	3,374	2,019	67.1	26,190	16,363	60.1
			(Inflation Adjusted Dollars)			
United States	3,575	2,897	23.4	24,178	20,481	18.1
Southeast*	2,801	2,254	24.3	20,365	17,320	17.6
Georgia	3,033	2,145	41.4	22,608	17,387	30.0

* Twelve southeastern states, see Table 1.

Values adjusted for inflation by use of the 1982-84 All Urban Consumers - (CPI-U), U.S. City Average, All Items, computed on a Fiscal Year basis, beginning July 1 and running throught June 30 of the next year, rounded to the nearest dollar. Computed by Division of Research.

Sources: State Education Performance Chart: Student Performance, Resource Inputs, State Reforms, and Population Characteristics, 1982 and 1988, U.S. Department of Education, Office of Planning, Budget and Evaluation, Washington, D.C., 1989.; Consumer Price Index, (CPI-U), U.S. City Average, All Items, 1982-84=100, U.S. Department of Labor, Bureau of Labor Statistics, Washington, D.C., Feb, 1988.

Table 3

Average Daily Attendance (ADA)
State of Georgia School Systems 1983-84, 1987-88

	School Year 1983-84				School Year 1987-88			
ADA Students (Number of Students)	Systems		Students		Students		Systems	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1-999	15	8.0	8,265	0.8	16	8.6	9,286	0.9
1,000-2,499	76	40.6	130,104	13.3	69	37.1	117,092	11.3
2,500-4,999	53	28.3	182,246	18.6	58	31.2	202,786	19.6
5,000-9,999	28	15.0	200,830	20.5	26	14.0	195,713	18.9
10,000-19,999	5	2.7	65,782	6.7	7	3.8	91,512	8.9
20,000+	10	5.3	391,303	40.0	10	5.4	417,183	40.4
Total	187	100.0	978,530	100.0	186	100.0	1,033,572	100.0

Source: Georgia Department of Education, Statistical Services Division, Atlanta, GA, April, 1989. Calculations and grouping by Division of Research.

population shifted slightly toward larger systems; that is, those systems with ADA's of 10,000 or more. In school year 1983-84, the fifteen largest systems served 46.7 percent of the ADA, while in 1987-88, the seventeen systems with ADA's of over 10,000 accommodated 508,695 students or 49.2 percent of the state ADA.

Appendix 1, listing individual school systems, shows each system's ADA school years ending in 1984 and 1988, with the DeKalb County system leading in both years. The Cobb County school system, Georgia's third largest in 1984, grew by 8,289 students (16.1 percent) to become the second largest system in 1988, displacing the Atlanta system which lost 5.3 percent (3,314 students) of its ADA student population between 1984 and 1988. Second only to the Jackson County increase of 39.1 percent in ADA is the Gwinnett County system. While remaining fourth in both 1984 and 1988, this suburban county system grew by 35.4 percent, adding 13,839 students to its ADA. Although growth in the Gwinnett system is unusually high, its expansion is typical of school systems located in expanding suburban communities adjacent to large central cities. The county systems of Fayette, Bryan, Dawson, Camden, Columbia, Troup, Henry, Liberty and Gordon, all located near expanding metropolitan areas or military bases, each grew by more than 20 percent between the 1983-84 and 1987-88 school years.

TOTAL COST OF EDUCATION PER STUDENT

Table 4 indicates that cost per child in the Georgia educational system grew substantially from 1983-84 to 1987-88. Statewide, 1983-84 to 1987-88 total cost-per-child receipts increased by $1,098, or 46.4 percent, with the increases coming almost entirely and equally from state ($673 or 48.8 percent) and local ($422 or 49 percent) sources. Federal payments increased only 2.4 percent over their 1984 level. It should be noted that Federal receipts, as defined here, *do not* include special restricted grants-in-aid received directly by individual systems. These revenues are dedicated to highly specialized student populations, providing funds for such programs as Head Start, alcohol and drug abuse education, vocational and employment programs, and special centers and services for handicapped students.

When the data are adjusted for inflation, the increase in funding is even more significant, with total receipts rising 28.7 percent, due entirely to increases in inflation adjusted state and local dollars exceeding 30 percent. After adjustment for inflation, federal revenues declined 10 percent, or $12 per child, compared to 1983-84 buying power levels.

Total cost-per-child ADA levels for individual systems varied greatly in both 1983-84 and 1987-88. In 1983-84, total ADA costs ranged from a low of $1,262 in the Chickamauga independent system to a high of $3,017 in the Baker County system. During this school year, 119 school systems, providing educational services to almost 50 percent of the Georgia's student population, had total ADA levels lower than $2,000 for each student, or less than 85 percent of the state average. In school year 1987-88, the lowest ADA of $1,634 was found in the Marion County system, while Quitman County spent $5,151 per ADA student. The next two highest systems were the large systems of Fulton and Atlanta, spending $4,857 and $4,803, respectively, on each ADA student. Table 5 indicates the rise of total cost-per-child figures to levels significantly above those of the 1983-84 school year. By 1987-88 only 62 school systems, educating 22 percent of Georgia's public school ADA students, were still spending below 85 percent of the state average total ADA cost-per-child.

Table 4

Receipts* by Source, 1983-84, 1987-88, Nominal and Inflation Adjusted Dollars (dollars rounded to nearest dollar, percentage changes to nearest tenth)

Year	Per Child Local	State	Federal	Total
Nominal Dollars				
1983-84	860	1,378	126	2,365
1987-88	1,282	2,052	129	3,463
Increase	422	673	3	1,098
Pct. Increase	49.0	48.8	2.4	46.4
Inflation Adjusted Dollars				
1983-84	845	1,354	124	2,324
1987-88	1,107	1,771	112	2,990
Increase	261	417	-12	666
Pct. Increase	30.9	30.8	-10.0	28.7

*Total receipts for maintenance and operation of Georgia Public Schools, Values deflated using the 1982-84 All Urban Consumers (CPI-U), U.S. City Average, All Items, Fiscal year July 1 through June 30 of the following year.

Source: Georgia Department of Education, Statistical Services Division, Atlanta, Georgia, April 1989. Calculation by the Division of Research.

SOURCES OF RECEIPTS

Each school system receives funding from local, state and federal sources, but dollar amounts and percentage shares vary considerably within individual school budgets. In 1983-84, the Jefferson County system had the lowest local percentage contribution, 10.1 percent, and the highest state percentage contribution, 83.5 percent, with federal aid

Table 5

Total Cost Per Child, and Students Served, in Average Daily Attendance
State of Georgia School Systems 1983-84, 1987-88

Total Cost per ADA Child (Dollars)	School Year 1983-84				School Year 1987-88			
	Systems		Students		Systems		Students	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1,200-1,499	3	1.6	3,357	0.3	0	0.0	0	0.0
1,500-1,799	54	28.9	194,494	19.9	1	0.5	1,454	0.1
1,800-2,099	88	47.1	426,466	43.6	0	0.0	0	0.0
2,100-2,399	27	14.4	130,303	13.3	1	0.5	1,074	0.1
2,400-2,699	5	2.7	120,390	12.3	15	8.1	54,271	5.3
2,700-2,999	8	4.3	40,598	4.1	60	32.3	220,050	21.3
3,000-3,299	2	1.1	62,922	6.4	64	34.4	351,631	34.0
3,300-3,599		0.0	0	0.0	29	15.6	176,273	17.1
3,600-3,899		0.0	0	0.0	6	3.2	53,143	5.1
3,900+		0.0	0	0.0	10	5.4	175,676	17.0
Total	187	100.0	978,530	100.0	186	100.0	1,033,572	100.0

Source: Georgia Department of Education, Statistical Services Division, Atlanta, GA, April 1989; Calculations by Division of Research.

contributing the remaining 10.5 percent. By 1987-88, the percentage shares in the Jefferson County system had shifted toward somewhat smaller local and federal funding levels, with proportionally larger state contributions. Local, state, and federal percentage shares, were, respectively. 8.7 percent, 88.3 percent, and 3.1 percent.

In contrast, some county and independent systems raised substantial portions of their total cost-per-child receipts at home. In 1983-84, local funding sources raised 56.6 percent, 52.8 percent, and 51.4 percent of the total cost-per-child ADAs in the Fulton, Atlanta, and Marietta systems; these shares were matched by state percentage shares of 41.4 percent for both Fulton and Atlanta, and 43.9 percent for Marietta. Federal funding for these large urban systems amounted to 1.9 percent, 5.8 percent, and 4.8 percent, respectively. In 1987-88, after the enactment of QBE, Georgia's three top systems had increased their local share of the total cost-per-child ADA figure. Fulton, Marietta, and Burke each raised their local share of the total cost-per-child to 67 percent, 61.7 percent , and 60.2 percent, respectively. Appendix 1 details the 1987-88 percentage distribution of each school systems source of receipts, and shows the percentage change in dollars received between 1983-84 and 1987-88, by receipt source.

Table 6 indicates that, for a number of school systems over the five-year period, the balance of receipts per child moved to proportionately more funding by the state. In 1983-84, the state provided 60 percent or more of the total ADA cost to 145 individual school systems, whereas in 1987-88, 157 individual systems, or 84 percent of the total Georgia system, received 60 percent or more of their ADA cost-per-child receipts from the state.

Percentage changes in state dollar contributions ranged from -7.1 percent (Burke) to 101.1 percent (Hogansville). The state average per-child increase rose by 48.8 percent over the five-year period; by 1987-88, 56 systems (30 percent) had received state cost-per-child increases below the state average and 130 (69.8 percent) received increases at or above 48.8 percent of their 1983-84 cost-per-child funding amounts.

As a percentage share of the total state ADA cost-per-child, federal government receipts have declined over the five years. While this source of receipts represented 5.3 percent of the 1983-84 total cost-per-student, the comparative 1987-88 figure had declined to 3.7 percent. Federal funding also has declined in dollar amounts, with 82 school systems, or 44 percent, receiving fewer funds in 1987-88 than they had in 1983-84.

COST-PER-CHILD BY SCHOOL FUNCTION

Figure 1 illustrates, by function, significant increases in school financing generated between 1983-84 and 1987-88. Again, the reader is strongly cautioned *not* to mix the dollar and percentage information presented in this section of the analysis with data from the prior section, which is based on different financial assumptions. Expenditure totals ap-

Table 6

Georgia Public School Systems,
Sources of Percentage Shares of Total Receipts

Percent Range	LOCAL		STATE		FEDERAL	
	Number of Systems	Percent of Systems	Number of Systems	Percent of Systems	Number of Systems	Percent of Systems
			School Year 1983-84			
0-9.9	0	0.0	0	0.0	158	84.5
10-19.9	33	17.6	0	0.0	28	15.0
20-29.9	93	49.7	0	0.0	1	0.5
30-39.9	44	23.5	0	0.0	0	0.0
40-49.9	13	7.0	8	4.3	0	0.0
50-59.9	4	2.1	34	18.2	0	0.0
60-69.9	0	0.0	95	50.8	0	0.0
70-79.9	0	0.0	49	26.2	0	0.0
80-plus	0	0.0	1	0.5	0	0.0
Total	187	100.0	187	100.0	187	100.0
			School Year 1987-88			
0-9.9	2	1.1	0	0.0	181	97.3
10-19.9	51	27.4	0	0.0	5	2.7
20-29.9	84	45.2	0	0.0	0	0.0
30-39.9	28	15.1	4	2.2	0	0.0
40-49.9	12	6.5	8	4.3	0	0.0
50-59.9	6	3.2	17	9.1	0	0.0
60-69.9	3	1.6	53	28.5	0	0.0
70-79.9	0	0.0	98	52.7	0	0.0
80 plus	0	0.0	6	3.2	0	0.0
Total	186	100.0	186	100.0	186	100.0

Source: Georgia Department of Education, Statistical Services Unit, Atlanta, GA, April, 1989; Calculations by Division of Research.

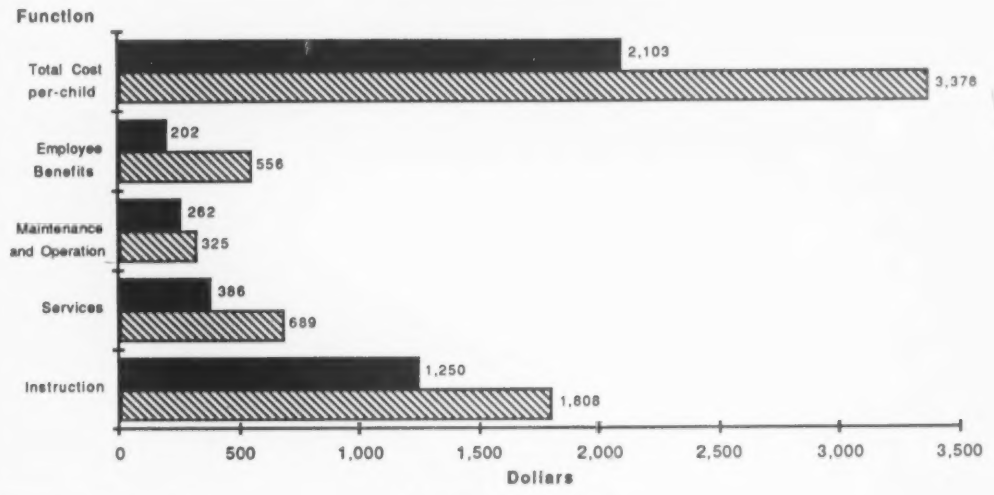
proximate but do not equal receipt totals, since fiscal management and reporting structures for expenditures and receipts varied within the study period. During the 1980s Georgia changed its method of accounting, moving from a cash basis to an accrual basis by fiscal year 1987-88.

Dollar totals for cost-per-child, by function, increased substantially over the five-year span, rising 60.7 percent, from $2,103 in 1983-84 to $3,378 in 1987-88. The cost-per-child breakdowns show varying increases by function, with instruction rising $558 or 44.6 percent, total services rising $303 or 78.2 percent, maintenance and operations rising $63 or 24.3 percent, and employee benefits rising a noteworthy $354 or 174.8 percent. The substantial increment in employee benefits can be attributed to steadily escalating costs in group medical insurance premiums, increased employer's social security contributions, and rising demands for teacher retirement matching funds. Additional costs to the employee benefits function may be attributed to changes in functional allocation formulas used by some local school systems prior to 1987. The services function includes pupil services, staff services, general administrative services, school administrative services, and transportation services.

Figure 2 reveals, on a state level, the average 1983-84 and 1987-88 percentage distributions, by function, of the average cost-per-child. An anomaly of this data reflects a decrease in the *percentage* of the total cost-per-child dollar dedicated to instruction. This is best understood within the limits of the function definition: "instruction" includes those activities and services dealing *directly* with the inter-

Figure 1

Georgia Public School System
Average Cost-Per-Child, By Function*
1983-84 and 1987-88



*Average Daily Attendance

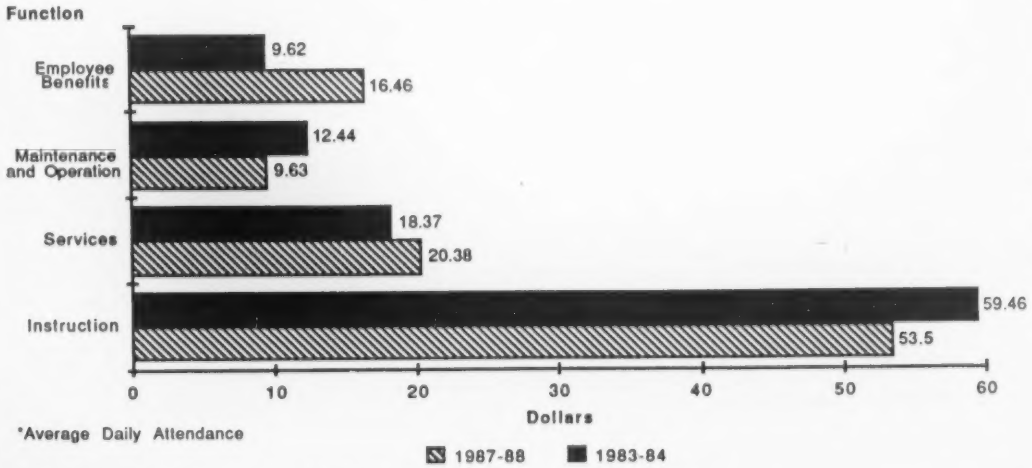
1987-88 1983-84

Note: Interest on loan included in total cost-per-child.

Source: Georgia Department of Education, Statistical Services Unit, Cost-per-child, (ADA), 1983-84, 1987-88, unpublished data.

Figure 2

Georgia Public School System,
Percentage Breakdown,
Average Cost-Per-Child, By Function,*
1983-84 and 1987-88



*Average Daily Attendance

1987-88 1983-84

Note: Percentages will not add to 100.0 due to rounding; interest on loans not included.

Source: Georgia Department of Education, Statistical Services Unit, Cost-per-child, (ADA), 1983-84, 1987-88, unpublished data.

action between teachers and students. Cost increases related to non-classroom activities designed to support, improve, and supplement the teaching process mostly are incorporated into the "services" function. Thus, while the service function accounts for costs ascribed to the general administration of school districts, it also includes a variety of educational enhancements, such as curriculum development, instructional techniques, and staff training and development. Increases in employee benefits also may be viewed as indirect payroll costs that should be added to the total costs of instruction.

Appendix 2 details, by individual school systems, the 1987-88 total cost-per-child, the functional percentage distribution, and changes from the 1983-84 percentage distribution.

SUMMARY

This article brings together a variety of financial measures bearing on the financial changes resulting from Georgia's recent educational reforms. National and regional comparisons highlight Georgia's ranking among its regional southern neighbors and in the nation as a whole. With the implementation of QBE, Georgia clearly has made a pronounced effort to improve financial aspects of its educational structure. Undoubtedly, many local school systems have benefitted by the funding and policy initiatives of QBE. Notwithstanding these gains, it will take more than a few years of increased funding to compensate for decades of underfunding. While new state funding provides the financial means to raise the standards of many small and mid-sized systems, it addresses only part of the educational quandary Georgians face. After the needs of those systems have been met, what next? Will additional funding for continued improvements again become subject to the limits of local funding efforts? Will the state furnish local school systems with the necessary funding to improved teacher salaries and benefits, provide for sorely needed staff development and allow for the expanded maintenance and operation needs required by newly expanded facilities?

The next priority in improvement to Georgia's educational structure must be an attempt to raise the whole system to national standards. This effort will require still greater commitment and funding by Georgia's political and educational leaders.

APPENDIX 1

Selected Summary Statistics for Georgia Public School Systems

System Name	83-84 ADA K-12	87-88 ADA K-12	1987-88 Cost** Per Child	Percentage Distribution of 1987-88 Receipts Sources[1] Local	State	Federal	Percentage Change in Dollars 1983-84 to 1987-88 Total and By Source Total	Local	State	Federal
Appling	3,490	3,403	3,476	50.1	45.4	4.5	29.6	42.5	19.2	14.6
Atkinson	1,317	1,271	3,245	20.3	72.1	7.6	47.9	18.4	59.3	46.6
Bacon	1,997	1,973	2,995	18.0	76.2	5.8	55.9	48.1	56.8	69.5
Baker	399	400	4,395	48.0	43.2	8.7	30.4	52.5	16.2	9.8
Baldwin	5,434	5,602	3,240	26.7	69.4	3.9	41.7	46.4	43.1	2.6
Banks	1,331	1,442	3,038	24.3	73.0	2.8	42.2	34.1	49.9	-22.0
Barrow	4,244	4,751	3,089	29.2	67.4	3.5	54.5	54.6	57.6	11.1
Bartow	6,743	7,393	3,304	34.5	62.2	3.3	42.8	32.5	50.2	28.3
Ben Hill	1,034	1,159	2,804	31.0	65.2	3.9	48.7	84.8	40.5	-6.1
Berrien	2,647	2,636	3,229	20.1	69.1	10.8	28.7	13.6	59.0	-34.9
Bibb	23,204	22,383	3,521	30.4	64.2	5.4	47.9	24.4	63.5	38.3
Bleckley	1,956	1,905	3,112	19.1	77.3	3.6	49.5	30.5	60.6	-12.5
Brantley	2,161	2,271	2,875	15.5	79.5	5.0	50.2	28.4	57.7	21.7
Brooks	2,708	2,577	3,379	22.3	69.9	7.8	52.3	41.9	65.1	2.8
Bryan	2,327	3,103	2,658	18.0	78.3	3.7	46.0	28.8	54.6	-4.2
Bulloch	6,140	6,372	3,255	24.7	70.9	4.4	46.0	24.5	60.2	0.4
Burke	3,854	4,125	3,477	60.2	34.1	5.8	50.0	151.5	-7.1	-4.8
Butts	2,376	2,514	3,164	24.4	71.3	4.4	50.3	40.5	58.0	7.1
Calhoun	1,259	1,171	3,332	20.3	72.8	6.9	42.1	43.1	49.8	-9.4
Camden	3,261	4,230	2,929	29.5	67.0	3.6	40.3	39.1	44.9	-8.3
Candler	1,478	1,511	2,905	16.2	77.3	6.6	45.5	15.1	56.0	27.5
Carroll	8,500	9,495	3,277	19.8	76.6	3.6	53.9	31.6	64.3	8.0
Catoosa	7,051	7,430	2,894	20.3	76.3	3.4	54.8	27.8	65.7	27.5
Charlton	1,600	1,617	3,254	34.3	61.1	4.6	43.2	61.0	45.6	-29.9
Chatham	27,857	29,415	3,982	44.9	50.8	4.2	49.5	58.1	47.8	3.7
Chattahoochee	299	346	3,823	11.1	72.4	16.5	46.1	-7.1	64.3	33.0
Chattooga	2,994	2,917	2,956	13.9	79.6	6.5	42.6	-4.5	60.2	10.2
Cherokee	11,181	13,349	3,077	31.0	67.1	1.9	46.2	34.9	56.3	-21.7
Clarke	9,251	9,983	3,941	43.7	52.8	3.6	29.0	23.7	34.3	20.9
Clay	357	415	3,458	23.7	65.1	11.3	25.1	81.9	27.2	-28.6
Clayton	29,251	29,631	3,338	39.7	57.8	2.5	43.9	49.6	43.3	-4.9
Clinch	1,437	1,358	3,572	29.4	64.4	6.2	52.6	54.4	53.3	38.1
Cobb	51,430	59,716	3,277	42.7	55.8	1.5	38.8	38.6	39.6	18.2
Coffee	5,511	5,782	3,106	23.0	71.8	5.1	54.8	46.1	63.3	5.4
Colquitt	7,066	7,049	3,224	24.0	71.9	4.1	56.1	42.3	66.8	-0.1
Columbia	8,871	11,319	2,800	26.5	70.6	2.9	41.8	21.5	53.6	5.3
Cook	2,626	2,520	3,209	20.2	75.2	4.6	51.5	9.5	73.0	12.6
Coweta	8,133	8,577	3,552	34.4	62.1	3.4	53.4	41.0	63.4	26.7
Crawford	1,416	1,389	3,267	22.3	72.9	4.8	49.6	28.7	63.1	-0.3
Crisp	4,046	4,167	3,298	23.5	70.2	6.4	52.8	57.3	53.8	30.4

(continued)

System Name	83-84 ADA K-12	87-88 ADA K-12	1987-88 Cost** Per Child	Percentage Distribution of 1987-88 Receipts Sources[1] Local	State	Federal	Percentage Change in Dollars 1983-84 to 1987-88 Total and By Source Total	Local	State	Federal
Dade	2,042	2,105	2,946	21.0	74.4	4.6	48.8	21.0	61.8	18.5
Dawson	1,126	1,486	3,190	38.8	57.8	3.4	26.1	42.3	16.6	38.8
Decatur	5,332	5,685	2,879	20.4	74.5	5.2	46.3	21.3	62.2	-8.8
DeKalb	67,662	68,035	4,417	56.7	41.4	1.9	56.3	77.2	34.6	55.8
Dodge	3,343	3,252	3,284	18.3	75.7	6.0	60.1	41.6	70.6	16.4
Dooly	1,913	1,825	3,490	30.0	62.1	8.0	48.0	74.6	48.3	-6.9
Dougherty	18,083	17,637	3,447	27.2	66.9	5.9	57.7	36.8	66.8	71.6
Douglas	11,759	12,569	3,245	29.2	68.8	2.1	55.2	49.0	59.9	12.1
Early	2,622	2,602	3,000	21.9	70.5	7.6	37.5	28.1	47.0	-1.1
Echols	503	432	3,952	25.0	70.1	4.9	52.9	21.7	75.5	-0.5
Effingham	4,178	4,889	2,893	25.2	71.8	3.0	52.1	37.3	59.9	19.6
Elbert	3,509	3,408	3,079	21.0	74.4	4.6	51.0	28.9	62.5	11.0
Emanuel	4,025	4,243	3,050	18.5	75.3	6.2	46.3	13.5	57.3	49.2
Evans	1,677	1,679	2,856	13.8	79.8	6.4	51.3	44.7	59.1	-0.1
Fannin	2,588	2,625	3,100	18.2	77.0	4.8	42.4	18.9	57.4	-19.6
Fayette	7,960	10,743	3,172	38.5	60.5	1.0	47.3	56.2	44.0	-18.7
Floyd	8,437	8,180	3,594	34.4	62.9	2.7	47.5	39.5	52.3	46.1
Forsyth	5,793	6,598	3,619	43.6	53.9	2.5	48.8	62.9	40.2	24.0
Franklin	3,074	2,927	3,121	19.6	75.9	4.6	60.5	40.1	66.2	69.3
Fulton	33,058	37,173	4,380	67.0	31.3	1.7	43.0	69.2	8.0	22.7
Gilmer	2,000	2,262	3,078	24.8	71.4	3.8	46.3	50.0	48.9	-1.6
Glascock	672	467	3,256	12.6	83.5	3.9	85.7	56.2	97.5	10.5
Glynn	9,075	9,580	3,762	45.3	50.6	4.1	34.3	35.3	32.5	47.7
Gordon	3,940	4,750	3,063	22.1	75.4	2.5	40.0	1.8	60.1	-4.8
Grady	3,891	3,908	3,035	19.4	74.1	6.5	51.4	21.2	65.7	22.6
Greene	2,190	2,358	3,215	26.2	68.6	5.3	45.9	57.3	47.9	-4.9
Gwinnett	39,125	52,964	3,093	44.6	54.2	1.2	46.2	64.1	34.7	23.0
Habersham	4,327	4,548	3,171	28.6	69.0	2.4	41.4	19.2	54.4	18.7
Hall	11,120	11,819	3,121	28.9	66.8	4.3	40.2	35.1	48.6	-13.3
Hancock	1,990	1,855	2,774	19.0	72.9	8.1	41.8	83.0	42.2	-8.3
Haralson	2,618	2,545	3,259	21.1	74.4	4.6	55.0	22.1	67.8	54.8
Harris	2,374	2,478	3,170	30.2	65.2	4.7	36.4	29.9	41.4	16.1
Hart	3,267	3,131	3,061	21.7	73.4	4.8	44.2	25.2	55.3	2.8
Heard	1,344	1,478	3,476	46.0	50.1	4.0	22.5	22.9	22.4	20.1
Henry	6,740	8,433	3,343	38.6	57.6	3.8	66.5	102.7	49.7	48.7
Houston	13,639	14,076	2,845	18.6	77.7	3.7	30.0	-9.7	58.4	-49.1
Irwin	1,552	1,611	2,941	21.4	72.9	5.7	27.1	12.4	42.8	-33.3
Jackson	2,329	3,239	3,194	29.5	67.0	3.5	29.7	-0.9	48.9	48.9
Jasper	1,269	1,344	3,126	26.1	69.0	4.9	35.3	28.5	48.6	-31.7
Jeff Davis	2,431	2,359	2,775	20.9	74.9	4.2	43.8	4.2	60.7	44.9
Jefferson	3,427	3,423	2,756	17.0	75.7	7.4	46.6	39.3	54.9	2.9
Jenkins	1,659	1,645	3,102	17.3	77.2	5.5	33.6	35.0	44.7	-37.0
Johnson	1,505	1,459	3,250	17.1	76.9	6.0	65.9	38.3	77.5	30.9
Jones	3,309	3,338	2,858	19.1	77.6	3.3	51.4	55.3	59.8	-36.2
Lamar	2,028	2,133	3,039	25.7	71.5	2.8	33.9	9.7	50.6	-26.2

(continued)

System Name	83-84 ADA K-12	87-88 ADA K-12	1987-88 Cost** Per Child	Percentage Distribution of 1987-88 Receipts Sources† Local	State	Federal	Percentage Change in Dollars 1983-84 to 1987-88 Total and By Source Total	Local	State	Federal
Lanier	1,194	1,129	3,064	19.1	74.5	6.4	58.4	72.0	56.0	50.0
Laurens	4,002	4,123	3,408	24.8	70.6	4.7	34.7	16.4	48.6	-14.9
Lee	2,989	3,485	2,741	19.4	77.4	3.2	33.0	3.4	48.1	-22.9
Liberty	5,599	6,888	2,699	17.9	77.4	4.7	56.2	92.5	70.7	-50.2
Lincoln	1,293	1,345	3,116	20.8	74.9	4.3	38.6	36.3	48.9	-34.8
Long	840	935	2,884	26.1	69.1	4.8	35.4	31.9	42.5	-13.7
Lowndes	6,196	6,680	3,410	22.9	73.5	3.6	54.3	25.8	71.5	-3.8
Lumpkin	1,807	2,029	3,432	36.9	61.0	2.0	58.9	101.4	42.4	19.1
Macon	2,575	2,504	3,089	26.1	66.0	7.8	23.4	-2.5	40.7	7.7
Madison	3,388	3,454	3,026	20.2	76.2	3.6	44.2	9.7	59.6	13.0
Marion	1,624	1,454	3,044	17.5	77.3	5.2	49.0	36.5	58.4	-5.2
McDuffie	3,612	3,817	3,020	18.9	73.1	8.0	53.7	87.5	58.4	-9.1
McIntosh	1,701	1,575	3,500	26.2	67.7	6.1	52.9	44.1	60.9	18.4
Meriwether	4,183	4,120	2,888	16.1	79.2	4.7	43.0	5.6	60.3	-10.7
Miller	1,329	1,243	3,332	28.4	66.0	5.7	41.9	42.8	52.5	-22.9
Mitchell	3,095	3,028	3,007	26.4	66.5	7.1	47.6	59.0	44.7	37.1
Monroe	2,411	2,722	3,187	55.6	40.4	4.0	28.6	62.1	2.2	2.4
Montgomery	1,191	1,116	2,949	19.3	73.1	7.7	56.8	77.8	48.8	98.9
Morgan	2,280	2,384	3,187	26.7	67.8	5.6	45.0	47.3	48.7	4.8
Murray	4,000	4,623	2,810	20.8	75.7	3.6	43.4	32.3	50.2	-2.4
Muscogee	28,303	28,205	3,477	29.1	66.6	4.3	38.6	32.2	63.0	-53.5
Newton	7,078	7,265	3,236	25.3	71.0	3.8	50.6	41.3	56.2	22.7
Oconee	2,481	2,870	3,151	27.8	69.6	2.6	47.7	58.0	46.5	-0.6
Oglethorpe	1,675	1,625	3,271	23.1	72.5	4.4	52.1	50.5	57.7	-0.5
Paulding	5,626	6,330	3,083	25.7	71.9	2.4	58.6	52.1	63.2	15.9
Peach	3,746	3,722	2,826	15.6	78.7	5.7	52.0	25.9	65.1	-0.9
Pickens	2,119	2,346	3,445	34.9	61.5	3.6	50.9	48.5	57.4	-2.7
Pierce	2,652	2,648	2,839	17.4	77.9	4.7	45.9	0.0	65.0	19.3
Pike	1,690	1,739	3,051	23.1	72.4	4.5	48.2	43.9	52.1	17.8
Polk	6,085	6,175	3,066	20.6	76.2	3.2	45.0	11.9	62.0	-9.1
Pulaski	1,653	1,542	3,025	23.3	70.5	6.2	43.8	39.1	52.7	-6.5
Putnam	1,826	1,900	3,077	34.9	60.1	5.0	22.6	9.1	37.9	-16.6
Quitman	212	192	5,184	25.3	63.5	11.2	33.3	1.6	51.0	38.6
Rabun	1,754	1,774	3,265	44.4	53.4	2.2	28.4	52.5	19.2	-44.5
Randolph	1,692	1,673	3,088	16.4	77.1	6.5	49.4	40.6	64.0	-21.8
Richmond	28,890	30,452	3,412	35.1	60.4	4.5	46.6	42.4	53.9	4.0
Rockdale	8,257	9,443	3,512	39.6	58.7	1.8	48.6	42.1	55.8	-3.1
Schley	388	411	3,631	26.0	66.1	7.9	22.5	27.2	28.1	-17.5
Screven	2,619	2,844	3,241	25.4	68.8	5.8	34.2	-2.0	57.5	18.1
Seminole	1,755	1,746	2,908	24.7	72.6	2.7	30.9	5.0	49.3	-36.0
Spalding	9,274	9,718	3,278	25.0	70.7	4.4	59.2	46.2	68.5	14.7
Stephens	3,937	3,703	3,267	25.3	71.0	3.6	58.3	43.7	65.5	38.1
Stewart	1,191	940	3,663	23.0	67.9	9.1	62.2	90.9	56.3	47.3
Sumter	1,695	1,933	3,142	34.5	59.7	5.9	34.4	55.0	30.3	-8.2
Talbot	1,039	967	3,255	21.3	71.8	6.9	39.8	49.3	49.7	-25.8

(continued)

System Name	83-84 ADA K-12	87-88 ADA K-12	1987-88 Cost** Per Child	Percentage Distribution of 1987-88 Receipts Sources† Local	State	Federal	Percentage Change in Dollars 1983-84 to 1987-88 Total and By Source Total	Local	State	Federal
Taliaferro	160	162	4,038	35.3	58.0	6.8	3.5	18.4	11.2	-54.0
Tattnall	2,721	2,929	3,115	23.5	70.1	6.4	60.9	60.6	66.0	20.3
Taylor	1,566	1,586	3,094	19.2	74.2	6.6	47.5	52.0	49.6	18.7
Telfair	2,299	2,146	3,323	18.8	75.5	5.7	54.3	23.5	70.3	8.2
Terrell	1,967	1,826	3,141	12.4	79.1	8.5	50.2	-14.4	78.0	11.2
Thomas	3,933	4,027	3,294	19.2	75.4	5.4	40.8	14.0	53.5	7.0
Tift	6,650	7,052	2,825	16.9	76.2	7.0	50.0	29.2	64.7	-5.2
Toombs	2,169	2,187	3,214	17.8	76.0	6.2	62.0	20.5	72.2	117.7
Towns	747	731	2,809	21.1	73.3	5.6	11.7	-20.2	35.0	-36.4
Treutlen	1,286	1,297	3,119	22.0	73.0	5.0	67.8	158.6	59.3	-5.0
Troup	3,663	4,639	2,865	17.4	77.7	4.9	36.7	-15.6	54.7	108.6
Turner	2,084	1,937	3,012	15.0	77.5	7.6	52.3	26.0	61.0	33.0
Twiggs	1,451	1,715	3,176	27.1	68.1	4.8	44.3	35.1	57.0	-17.8
Union	1,639	1,727	3,046	21.3	74.3	4.5	25.3	33.0	38.0	-55.2
Upson	3,048	3,090	2,850	17.5	79.7	2.9	44.9	1.3	64.2	-11.7
Walker	9,056	8,599	3,163	22.2	74.7	3.2	62.7	56.8	68.5	5.4
Walton	5,479	5,847	2,931	23.4	72.0	4.6	54.2	53.9	54.9	45.4
Ware	3,596	3,678	3,000	24.0	72.3	3.7	48.7	34.8	56.7	12.6
Warren	1,093	1,019	3,076	23.5	65.8	10.7	43.9	28.4	44.9	85.2
Washington	3,242	3,348	3,190	25.5	68.2	6.3	39.7	25.8	53.7	-9.6
Wayne	4,107	4,260	2,943	25.8	70.3	3.9	48.9	54.4	50.1	7.9
Webster	265	268	4,133	34.8	58.4	6.8	16.0	20.7	25.2	-36.6
Wheeler	1,059	980	3,165	15.3	77.4	7.3	47.3	2.3	65.7	17.3
White	1,703	2,010	3,628	35.8	58.0	6.2	30.4	59.6	27.2	-28.6
Whitfield	8,867	8,894	3,280	27.9	70.2	1.9	55.9	44.2	65.0	-14.6
Wilcox	1,292	1,290	3,125	19.6	75.1	5.4	29.9	28.8	49.4	-53.5
Wilkes	1,976	1,981	3,046	26.7	68.2	5.2	41.0	57.1	42.1	-14.0
Wilkinson	2,034	1,992	3,283	31.3	64.8	4.0	40.3	38.2	44.6	3.0
Worth	3,567	3,711	2,916	18.0	76.5	5.5	41.4	27.2	51.0	-6.7
Americus*	3,537	3,073	3,121	14.9	79.0	6.1	83.6	48.8	96.1	46.4
Atlanta *	62,523	59,209	4,955	56.5	38.4	5.2	49.6	60.0	38.9	32.5
Bremen*	1,106	1,146	3,129	26.5	69.4	4.2	57.3	34.9	64.1	151.0
Buford*	1,322	1,359	3,502	35.8	61.0	3.2	59.5	64.1	61.0	7.0
Calhoun*	1,937	1,623	3,439	47.9	49.9	2.3	39.8	86.7	13.5	16.8
Carrollton*	2,756	2,696	3,695	35.4	61.6	3.0	61.6	59.3	67.4	4.2
Cartersville*	1,920	2,293	3,323	40.0	57.9	2.1	41.7	41.5	46.3	-22.4
Chickamauga*	1,022	1,018	2,753	12.5	84.1	3.5	82.1	12.5	98.4	138.4
Commerce*	1,127	1,030	3,228	23.4	74.2	2.4	88.4	159.7	79.1	-8.4
Dalton*	3,685	3,742	4,242	52.1	44.9	3.0	33.3	47.4	20.9	19.1
Decatur*	2,304	2,038	5,094	49.6	46.4	4.1	67.3	72.9	67.8	16.9
Dublin*	3,286	3,456	2,800	19.6	76.3	4.1	61.2	66.7	71.4	-28.5
Fitzgerald*	2,165	2,337	2,835	16.8	78.2	4.9	62.8	43.9	75.3	-3.0
Gainesville*	2,735	2,814	3,716	51.0	46.3	2.7	45.2	74.3	29.9	-32.3
Hogansville*	887	693	3,143	11.5	83.4	5.0	83.3	35.4	101.0	11.5

(continued)

System Name	83-84 ADA K-12	87-88 ADA K-12	1987-88 Cost** Per Child	Percentage Distribution of 1987-88 Receipts Sources† Local	State	Federal	Percentage Change in Dollars 1983-84 to 1987-88 Total and By Source Total	Local	State	Federal
Jefferson*	1,380	1,006	3,086	8.7	88.3	3.1	88.1	61.8	98.8	-10.4
Lagrange*	4,545	4,449	3,456	33.0	62.3	4.7	57.5	63.4	57.1	29.0
Marietta*	4,045	4,457	4,395	61.7	35.3	3.0	42.5	71.3	14.6	-11.0
Pelham*	1,676	1,741	2,611	8.6	86.5	4.9	47.2	-20.9	67.9	-11.0
Rome*	4,404	4,515	3,419	33.0	61.9	5.2	46.8	30.7	60.3	20.4
Social Circle*	903	947	2,962	19.1	77.0	3.9	49.0	71.3	56.2	-40.9
Thomaston*	1,579	1,537	2,827	28.3	67.2	4.5	34.6	1.7	59.9	1.8
Thomasville*	3,293	3,463	3,254	31.7	63.6	4.7	40.5	31.7	51.3	-7.3
Trion*	955	1,074	2,444	15.9	82.9	1.2	60.0	34.3	66.4	46.8
Valdosta*	6,626	6,663	2,819	22.3	71.3	6.4	44.6	23.8	54.4	28.3
Vidalia*	2,430	2,480	2,742	14.6	79.3	6.1	61.3	28.0	71.9	36.5
Waycross*	3,297	3,005	3,369	24.0	68.5	7.5	61.4	44 0	67.6	69.5
West Point*	678		—	—	—	—	—	—	—	—
State Totals	978,530	1,033,572	3,463	37.0	59.2	3.7	46.4	49.0	48.8	2.4

— Not applicable; West Point Independent system was consolidated in to the Troup County System in 1987.

* Independent System
**Rounded to the nearest dollar.
† Rounded to the nearest tenth of a percent.

Source: Georgia Department of Education , Statistical Services Division, Local, State and Federal Receipts for the Maintenance and Operation of Georgia Public Schools, 1983-84; Local, State and Federal Receipts for the Maintenance and Oeration of Georgia Public Schools, 1987-88, April 1989; calculations by Division of Research, College of Business Administration, University of Georgia.

APPENDIX 2

School Year Budgets, Percentage Distribution by Functional Cost Per Child
Georgia School Systems, 1987-88 and Change From 1983-84

School System	1987-88 Cost Per Child (dollars)	1987-88 Percentage Distribution, by Function				Change in Functional Percentage Distribution, 1983-84 to 1987-88			
		Instruction	Services**	Main & Operation	Employee Benefits	Instruction	Services	Main & Operation	Employee Benefits
Appling	3,404	56.7	23.0	8.5	11.9	-5.8	4.6	-3.7	4.9
Atkinson	3,109	51.4	24.2	8.2	16.2	-10.1	3.8	-1.5	7.7
Bacon	2,891	54.2	22.3	10.1	13.4	-11.1	2.9	-1.2	9.4
Baker	4,549	53.9	27.9	5.9	12.3	1.3	-0.1	-5.8	4.9
Baldwin	3,082	52.4	21.6	9.3	16.7	-8.7	2.0	-0.7	7.4
Banks	2,807	52.6	22.6	8.1	15.8	-7.1	1.7	-3.2	7.7
Barrow	2,872	55.0	19.4	9.0	16.6	-5.0	0.8	-3.7	7.9
Bartow	3,317	51.9	20.7	10.4	16.7	-6.5	3.2	-3.0	7.1
Ben Hill	2,735	58.5	21.0	4.1	16.4	-4.8	-1.1	-1.6	7.5
Berrien	2,865	56.7	21.1	8.5	13.7	-4.2	-1.6	-3.6	9.4
Bibb	3,383	53.3	19.0	10.4	17.3	-6.5	3.0	-4.1	7.6
Bleckley	3,163	56.9	20.9	10.2	11.9	-9.5	3.2	-2.3	8.5
Brantley	2,731	56.2	23.4	7.0	13.5	-11.2	4.0	-2.2	9.5
Brooks	3,397	54.2	20.8	8.3	16.8	-6.2	1.5	-2.3	7.0
Bryan	2,662	52.5	22.0	12.5	13.0	-9.7	1.9	-1.2	9.1
Bulloch	3,084	55.0	22.6	9.8	12.5	-7.5	1.8	-1.7	7.3
Burke	2,855	52.2	23.3	8.5	16.0	-8.0	2.2	-0.9	6.7
Butts	2,883	54.2	20.3	7.5	17.7	-8.1	2.3	-2.6	8.1
Calhoun	3,367	54.3	21.3	8.4	16.0	-10.0	2.5	-0.1	7.6
Camden	3,083	52.1	25.6	10.4	11.8	-8.5	2.6	-2.5	8.6
Candler	2,936	55.8	18.9	8.6	16.6	-6.1	1.2	-2.6	7.4
Carroll	3,087	53.3	21.1	7.9	17.7	-8.9	3.2	-3.0	8.8
Catoosa	2,785	54.2	18.4	9.5	17.9	-9.4	2.1	-1.9	9.2
Charlton	2,994	52.4	21.5	8.5	17.4	-8.8	2.8	-1.7	7.6
Chatham	3,699	51.5	21.8	8.8	17.9	-5.7	3.3	-3.6	6.1
Chattahoochee	3,546	60.4	21.1	6.7	11.8	2.3	-4.1	-5.4	7.3
Chattooga	3,099	57.6	19.2	9.5	13.6	-4.9	2.5	-3.2	5.7
Cherokee	2,859	54.1	18.8	8.8	18.3	-5.9	1.6	-4.3	8.7
Clarke	3,857	50.0	19.0	10.8	20.2	-7.7	3.5	-5.6	9.7
Clay	3,574	57.1	27.6	3.6	11.7	-3.1	0.3	-1.8	4.6
Clayton	3,541	55.7	19.1	11.3	13.8	-6.7	1.0	-2.2	7.9
Clinch	3,311	53.4	21.3	8.6	15.3	-8.6	3.5	-3.8	7.4
Cobb	3,201	54.1	18.1	10.2	17.7	-3.2	-0.1	-3.0	6.3
Coffee	2,997	55.4	20.6	7.0	17.0	-8.6	2.0	-1.7	8.3
Colquitt	3,162	54.0	22.0	10.7	13.3	-7.5	1.4	-2.2	8.4
Columbia	2,747	55.0	19.1	9.0	16.9	-6.4	1.0	-2.2	7.6
Cook	3,197	56.8	20.2	8.6	14.4	-6.5	2.0	-3.6	8.1
Coweta	3,371	53.5	19.2	10.5	16.8	-4.4	0.3	-2.3	6.4
Crawford	3,128	52.7	21.1	10.3	15.9	-3.2	-3.8	-0.3	7.3
Crisp	3,245	54.7	20.6	8.0	16.6	-9.6	3.0	-0.9	7.5

(continued)

School System	1987-88 Cost Per Child (dollars)	1987-88 Percentage Distribution, by Function				Change in Functional Percentage Distribution, 1983-84 to 1987-88			
		Instruction	Services**	Main & Operation	Employee Benefits	Instruction	Services	Main & Operation	Employee Benefits
Dade	3,036	50.7	19.4	11.9	17.9	-6.5	1.1	-1.6	7.1
Dawson	3,226	51.1	26.1	10.0	12.6	-8.5	7.6	-5.5	6.4
Decatur	2,906	56.1	20.4	9.5	13.8	-9.3	2.0	-2.0	9.1
DeKalb	4,258	55.1	17.4	10.2	17.3	-4.1	1.7	-2.4	4.8
Dodge	3,004	55.3	20.3	7.7	16.7	-5.0	-0.4	-2.5	8.0
Dooly	3,372	53.7	21.6	9.0	15.7	-8.0	1.3	-0.1	6.7
Dougherty	3,436	52.4	21.0	9.3	17.3	-7.2	1.5	-1.9	7.5
Douglas	3,104	51.6	22.2	9.4	16.9	-8.4	3.5	-2.6	8.2
Early	2,952	57.4	19.1	6.4	17.0	-8.5	1.6	-1.5	8.3
Echols	3,584	52.1	23.4	8.6	16.0	-9.5	3.2	-1.4	7.7
Effingham	2,708	54.0	20.6	8.6	16.2	-6.7	-0.6	-1.8	8.7
Elbert	2,930	55.5	20.2	6.9	17.4	-8.8	1.4	-1.5	8.8
Emanuel	2,682	56.8	19.5	6.3	17.4	-6.9	1.2	-3.1	8.8
Evans	2,721	59.9	20.1	6.7	13.3	-8.7	0.7	-1.7	10.0
Fannin	3,008	54.0	21.0	7.5	17.4	-8.9	2.4	-2.3	8.7
Fayette	2,947	58.6	17.9	9.7	13.8	-4.0	-0.7	-3.2	7.9
Floyd	3,412	51.7	19.0	11.9	17.3	-3.7	0.8	-3.9	6.9
Forsyth	3,224	53.4	18.4	11.5	16.6	-5.0	2.1	-1.7	5.1
Franklin	3,043	55.6	19.8	7.1	16.9	-9.8	2.9	-2.4	8.8
Fulton	4,857	49.8	29.5	8.6	12.1	-9.7	12.0	-5.3	3.0
Gilmer	2,929	52.7	20.7	8.7	17.8	-7.5	0.3	-1.2	8.2
Glascock	3,382	54.8	24.5	7.5	13.2	-11.1	3.2	-1.8	9.8
Glynn	3,647	50.4	23.1	9.1	17.3	-4.0	1.8	-3.4	5.5
Gordon	2,829	53.0	20.6	9.1	17.2	-7.0	0.8	-2.8	9.0
Grady	2,963	58.0	19.9	8.5	13.6	-9.3	1.3	-0.7	8.7
Greene	3,135	54.4	20.9	8.3	16.4	-5.7	1.4	-3.2	7.6
Gwinnett	3,127	53.1	19.7	8.2	19.0	-5.7	0.1	-2.3	8.0
Habersham	3,170	54.9	19.0	8.5	17.6	-5.7	1.1	-3.3	7.9
Hall	2,930	54.6	18.4	9.2	17.8	-5.5	0.1	-2.2	7.6
Hancock	2,959	52.2	23.0	11.5	13.3	-9.5	-0.6	1.8	9.3
Haralson	2,964	54.3	19.7	9.6	16.5	-7.3	1.2	-2.4	8.4
Harris	3,062	53.8	24.2	8.5	13.5	-6.5	2.6	-4.4	8.3
Hart	3,097	56.5	18.4	7.3	17.7	-7.1	0.2	-2.1	9.0
Heard	3,571	54.7	23.0	8.9	13.4	-7.1	3.0	-3.5	7.6
Henry	2,818	54.2	20.4	9.8	15.6	-7.4	3.4	-2.0	6.0
Houston	3,137	55.6	19.3	8.0	17.2	-7.8	2.7	-2.8	7.9
Irwin	3,018	56.3	22.3	6.9	13.8	-9.5	3.5	-2.3	7.6
Jackson	2,930	53.8	22.2	7.4	16.3	-4.6	0.7	-2.7	6.5
Jasper	2,978	54.2	22.8	6.4	16.6	-8.7	2.5	-1.5	7.7
Jeff Davis	2,855	57.9	20.5	9.5	12.1	-7.3	1.6	-2.9	8.6
Jefferson	2,599	58.0	20.0	10.1	12.0	-6.8	1.6	-2.0	7.1
Jenkins	3,045	55.3	22.6	9.0	13.2	-6.4	-0.4	-1.0	7.8
Johnson	3,025	53.6	22.1	6.8	17.6	-7.7	2.7	-4.2	9.2
Jones	2,712	55.8	20.7	6.7	16.8	-9.8	1.9	-1.3	9.2
Lamar	2,914	50.3	24.2	8.5	17.0	-8.2	5.1	-3.7	6.8

(continued)

School System	1987-88 Cost Per Child (dollars)	1987-88 Percentage Distribution, by Function				Change in Functional Percentage Distribution, 1983-84 to 1987-88			
		Instruction	Services**	Main & Operation	Employee Benefits	Instruction	Services	Main & Operation	Employee Benefits
Lanier	3,092	51.3	23.5	7.8	16.5	-11.7	5.1	-2.5	8.6
Laurens	3,498	54.6	22.0	6.8	16.6	-3.7	-1.7	-1.7	7.2
Lee	2,687	55.2	20.1	8.4	16.3	-8.0	1.4	-1.8	8.4
Liberty	2,464	55.7	19.1	9.1	16.1	-3.5	-0.2	-3.9	7.6
Lincoln	3,024	55.8	24.1	7.8	12.3	-10.4	3.8	-2.5	9.0
Long	2,966	50.8	25.1	8.7	15.5	-9.8	3.8	-0.6	6.6
Lowndes	3,350	50.8	23.6	9.3	16.0	-9.3	0.4	1.4	7.3
Lumpkin	3,130	50.7	21.4	9.5	17.5	-7.9	2.3	-2.3	7.3
Macon	3,068	52.4	20.8	9.9	16.9	-9.3	2.8	-1.5	8.0
Madison	2,715	55.9	19.3	7.4	17.5	-7.3	1.2	-2.5	8.6
Marion	1,534	52.3	30.0	5.7	12.0	-12.8	10.7	-4.2	6.3
McDuffie	2,860	58.5	19.0	9.3	13.2	-9.0	1.4	-1.6	9.2
McIntosh	3,314	52.2	25.7	8.7	13.3	-11.4	5.1	-1.9	8.1
Meriwether	2,893	54.7	23.5	8.1	13.6	-8.4	1.5	-2.6	9.5
Miller	3,265	49.7	26.3	7.8	15.9	-11.5	7.4	-3.2	7.2
Mitchell	3,057	54.2	22.1	10.3	13.4	-10.8	5.4	-3.8	9.3
Monroe	3,165	51.4	23.1	9.8	15.7	-5.0	1.6	-2.6	6.0
Montgomery	2,943	56.5	23.8	6.9	12.8	-5.5	1.0	-4.6	9.1
Morgan	3,016	54.3	19.9	9.0	16.8	-7.6	2.4	-1.5	6.6
Murray	2,530	57.7	17.9	10.9	13.5	-8.2	1.2	-1.5	8.5
Muscogee	3,552	52.8	19.4	9.9	17.8	6.7	6.3	0.3	-13.3
Newton	3,132	55.4	20.7	10.4	13.5	-11.7	4.9	-1.7	8.4
Oconee	3,030	58.7	20.8	8.6	12.0	-8.3	3.2	-3.1	8.2
Oglethorpe	3,218	53.4	25.0	6.6	15.0	-10.7	3.1	-1.2	8.8
Paulding	2,846	54.1	19.7	8.7	17.5	-5.8	1.2	-1.9	6.6
Peach	2,590	60.8	17.5	7.9	13.7	-7.9	1.6	-3.5	10.0
Pickens	3,127	56.4	19.4	8.6	15.4	-2.9	1.4	-5.3	6.7
Pierce	2,613	55.0	20.2	7.2	17.7	-7.9	1.4	-3.2	9.7
Pike	2,862	52.6	24.8	7.4	15.2	-8.9	3.0	-2.9	8.8
Polk	2,872	60.7	18.2	7.9	13.1	-6.2	0.8	-3.9	9.2
Pulaski	2,933	56.7	21.2	8.8	13.3	-6.1	1.8	-4.2	8.9
Putnam	3,233	57.4	21.7	8.8	12.2	-5.0	1.9	-3.9	7.0
Quitman	5,151	58.1	23.9	6.0	12.0	2.6	-7.1	-2.7	7.2
Rabun	3,330	50.6	21.7	10.3	17.4	-6.8	1.4	-2.2	7.6
Randolph	2,832	57.4	20.2	9.6	12.8	-8.7	3.0	-2.7	8.4
Richmond	3,262	54.0	19.8	9.5	16.7	-3.2	0.1	-2.5	6.8
Rockdale	3,322	52.8	21.6	9.2	16.4	-6.7	3.2	-3.3	6.7
Schley	3,772	55.7	27.5	5.0	11.8	1.1	-7.2	-1.5	7.6
Screven	3,040	56.2	23.4	6.5	13.9	-6.8	3.4	-4.4	7.8
Seminole	2,944	51.4	23.8	8.4	16.4	-9.4	3.6	-2.0	7.9
Spalding	3,160	53.5	18.5	10.0	18.0	-8.5	1.7	0.2	6.5
Stephens	3,138	56.0	17.9	9.0	17.1	-5.6	1.3	-3.5	7.9
Stewart	3,656	55.8	22.6	8.2	13.4	-7.9	1.1	-1.6	8.3
Sumter	3,040	50.7	24.9	8.3	16.0	-6.8	1.6	-1.0	6.1
Talbot	3,102	54.5	23.9	8.9	12.6	-7.9	2.2	-1.4	7.2

(continued)

School System	1987-88 Cost Per Child (dollars)	1987-88 Percentage Distribution, by Function				Change in Functional Percentage Distribution, 1983-84 to 1987-88			
		Instruction	Services**	Main & Operation	Employee Benefits	Instruction	Services	Main & Operation	Employee Benefits
Taliaferro	4,408	53.3	31.3	3.8	11.5	-3.8	0.9	-1.8	4.7
Tattnall	2,962	58.2	21.6	7.0	13.0	-6.6	3.6	-5.8	8.5
Taylor	2,925	58.2	22.4	7.2	12.2	-7.1	0.9	-2.6	8.7
Telfair	3,138	54.4	21.2	7.1	17.3	-7.8	1.6	-1.9	8.0
Terrell	3,073	60.9	19.9	6.8	12.4	-7.5	1.6	-2.5	8.4
Thomas	3,129	54.1	20.7	7.5	17.8	-8.0	2.4	-1.6	7.2
Tift	2,706	57.8	17.1	7.2	17.6	-8.6	1.6	-2.4	9.5
Toombs	2,883	55.5	22.0	6.2	16.3	-7.3	2.7	-3.7	8.4
Towns	2,912	51.1	21.3	11.1	16.6	-5.1	2.5	-5.6	8.1
Treutlen	2,652	57.9	20.5	8.2	13.5	-9.8	0.9	-0.8	9.8
Troup	2,871	51.3	22.1	9.6	16.9	-9.3	0.7	-0.3	8.9
Turner	2,977	59.8	19.7	7.1	13.3	-9.0	3.2	-3.0	8.8
Twiggs	3,184	52.5	22.3	8.9	16.1	-6.6	-0.1	-0.8	7.3
Union	3,091	54.3	21.4	10.9	13.4	-11.3	4.2	-1.7	8.8
Upson	2,687	53.7	22.0	7.0	17.3	-7.8	3.3	-5.1	9.6
Walker	3,009	53.0	19.4	9.7	17.9	-6.0	-0.6	-2.1	8.7
Walton	2,644	56.9	18.1	7.6	17.3	-9.0	2.4	-2.3	8.9
Ware	2,952	53.5	20.9	8.2	17.4	-9.3	2.7	-1.7	8.3
Warren	3,086	49.5	24.2	9.5	16.7	-11.0	4.2	-0.4	7.2
Washington	3,183	52.7	22.8	8.6	15.8	-8.4	3.9	-3.2	7.6
Wayne	2,896	55.0	19.0	9.4	16.6	-6.4	0.9	-2.6	8.1
Webster	4,310	51.0	30.3	7.4	11.3	-2.7	-3.0	-0.2	6.0
Wheeler	3,202	55.4	23.7	8.1	12.5	-6.8	-0.9	-0.9	8.7
White	3,368	49.9	25.0	8.7	16.4	-7.7	1.3	-0.7	7.1
Whitfield	3,278	52.2	21.7	9.8	16.3	-7.7	4.6	-2.9	6.1
Wilcox	3,117	57.2	22.9	7.0	12.9	-4.1	-0.8	-2.9	7.8
Wilkes	2,859	56.0	19.8	7.3	17.0	-7.4	0.8	-1.2	7.8
Wilkinson	3,316	53.9	19.9	9.9	16.3	-8.4	1.6	-0.5	7.3
Worth	2,805	57.7	20.9	8.2	13.1	-8.7	0.9	-1.5	9.3
*Americus	2,962	56.4	17.6	7.9	18.2	-14.8	7.2	-1.3	8.9
*Atlanta	4,803	48.2	20.0	13.9	17.8	-1.1	-1.2	-3.8	6.4
*Bremen	2,999	58.4	15.3	9.1	17.2	-8.1	3.7	-3.5	8.0
*Buford	3,451	53.0	21.8	7.5	17.7	-7.8	2.8	-2.8	7.9
*Calhoun	3,334	55.6	18.2	9.1	17.2	-9.0	3.1	-2.5	8.4
*Carrollton	3,412	56.5	16.4	9.8	17.3	-6.9	2.4	-3.5	8.1
*Cartersville	2,929	55.4	18.4	8.1	18.1	-8.1	3.9	-3.9	8.0
*Chickamauga	2,576	60.7	15.2	7.2	16.9	-9.7	1.6	-1.7	9.8
*Commerce	3,163	51.8	21.9	9.4	16.8	-15.7	4.8	2.5	8.3
*Dalton	4,146	49.8	19.2	13.0	17.2	-6.1	2.5	-3.5	6.5
*Decatur	4,733	48.9	20.5	13.4	17.1	-8.9	4.7	-1.8	6.0
*Dublin	2,774	58.2	17.8	6.7	17.4	-9.6	3.4	-2.4	8.6
*Fitzgerald	2,820	58.3	16.6	6.6	18.4	-10.8	3.7	-2.1	9.3
*Gainesville	3,635	55.8	18.7	8.5	17.0	-6.6	2.8	-2.6	6.4
*Hogansville	3,038	55.9	16.7	9.5	18.0	-8.7	0.9	-1.1	8.9

(continued)

School System	1987-88 Cost Per Child (dollars)	1987-88 Percentage Distribution, by Function				Change in Functional Percentage Distribution, 1983-84 to 1987-88			
		Instruction	Services**	Main & Operation	Employee Benefits	Instruction	Services	Main & Operation	Employee Benefits
*Jefferson	3,234	60.3	18.4	8.9	12.4	-12.5	4.4	-1.6	9.7
*Lagrange	3,298	54.4	19.6	8.8	17.1	-9.0	3.5	-2.0	7.5
*Marietta	4,250	50.9	21.0	10.8	17.3	-5.5	2.3	-2.2	5.5
*Pelham	2,450	61.7	17.0	5.7	15.6	-10.7	2.2	-2.0	10.4
*Rome	3,448	55.8	17.3	9.9	17.0	-3.8	-0.4	-2.3	6.6
*Social Circle	3,042	55.4	22.4	8.4	13.7	-12.5	6.2	-2.0	8.2
*Thomaston	2,758	56.7	18.2	7.3	17.8	-4.1	1.5	-4.8	7.4
*Thomasville	3,142	55.5	17.2	11.4	15.9	-4.8	0.7	-2.6	6.7
*Trion	2,324	60.3	16.1	6.1	17.4	-10.6	1.8	-0.4	9.2
*Valdosta	2,673	58.2	16.5	8.2	16.6	-5.6	1.1	-3.6	8.6
*Vidalia	2,691	61.3	18.1	7.1	13.5	-6.7	0.7	-2.9	8.8
*Waycross	3,351	56.0	16.7	9.1	18.2	-8.6	0.1	0.3	8.2
State Totals	3,378	53.5	20.4	9.6	16.5	-6.0	2.0	-2.8	6.8

Notes: Totals may not add to 100.0 due to rounding and exclusion of Interest on Loans; Data on cost per child by functional classification differs from cost per child by receipt source.

* Independent Systems

** Services grouping includes Pupil Services, Staff Services, General Administrative Services, School Administrative Services, and Transportation Services.

Source: State of Georgia Department of Education, Statistical Information System, Atlanta, GA, April, 1989; calculations by Division of Research.

GEORGIA BUSINESS STATISTICS

SERIES	FEB 1989	JAN 1989	DEC 1988	FEB 1988
Georgia Leading Indicators Index[1] (1969=100)	177.36	179.15	179.32	175.86
Georgia Coincident Indicators Index[2] (1969=100)	633.03	622.39	617.50	599.37
Nonagricultural Employment[2] (thousands)	2,929.9	2,921.3	2,949.9	2,818.2
Manufacturing Employment[2] (thousands)	566.3	566.6	569.8	576.1
Average Weekly Earnings, Manufacturing[2] (dollars)	353.57	355.72	370.09	354.83
Help Wanted Advertising, Atlanta Index[3] (1967=100)	250	250	262	261
Taxable Retail Sales[4] ($ millions)	5,223.9	5,053.0	4,485.9	5,363.7
Building Permits[5]				
Residential Housing Units, Private (thousands)	4.3	4.4	4.7	5.4
Value of Residential Housing ($ thousands)	265,015	250,370	276,179	324,001
Value of Nonresidential Construction ($ thousands)	199,523	147,697	239,227	195,497
Industrial Buildings	34,760	8,260	32,336	29,938
Office, Bank and Other Professional Buildings	29,645	20,654	87,312	42,816
Stores and Other Mercantile Buildings	26,464	28,075	41,694	48,496
Other	108,654	90,708	77,885	74,247
Consumer Price Index[6] (CPI-U, all items)				
South U.S. (1982-84 = 100)	119.2	118.9	118.5	114.4
South/Population more than 1,200,000[a]	120.1	119.7	119.2	115.2
South/Population 450,000 - 1,200,000[a]	120.3	119.9	119.7	115.1
South/Population 50,000 - 450,000[a]	118.0	117.8	117.6	113.4
South/Population Less than 50,000[a]	117.4	116.9	116.3	112.7
Atlanta (1982-84=100)[b]	–	–	121.7[c]	117.5[c]
Prices Received by Farmers, Georgia Index[7] (1977=100)	134[r]	135[r]	129	121
	1988:IV	1988:III	1988:II	1987:IV
Total Personal Income[8] ($ millions)	99,326	96,915	94,888	92,535

[1] Georgia Economic Forecasting Project, Division of Research, College of Business Administration, University of Georgia. Initial monthly values subject to revision.

[2] Labor Information Systems, Georgia Department of Labor.

[3] Series published by The Conference Board, Inc.

[4] Derived by the Division of Research, College of Business Administration, University of Georgia, from data of the Sales and Use Tax System, Georgia Department of Revenue.

[5] U.S. Department of Commerce, Bureau of the Census.

[6] U.S. Department of Labor, Bureau of Labor Statistics, Southeastern Regional Office.

[7] Georgia Department of Agriculture, Georgia Crop Reporting Service.

[8] U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System.

[a] Group size revised as of January 1, 1987; indexes revised to 1982-84=100 base as of January, 1988.

[b] Atlanta index is average of each 6 months of the calendar year; base revised to 1982-84=100 as of January 1, 1988.

[c] Data are for 2nd half, 1988, and 2nd half, 1987, respectively.

[r] Revised.

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GEORGIA BUSINESS AND ECONOMIC CONDITIONS

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The Effect of Proposed Changes in the Minimum Wage Law

Rudolph A. White

Teenagers, the group identified in all past studies as most subject to job losses from increases in the minimum wage, now constitute less than 7 percent of all workers nationally, with all persons up through age 24 comprising under 20 percent of all workers. Thus, as economist Gerard Adams of the University of Pennsylvania has stressed, minimum wage increases may lead to overall employment losses amounting to as little as 2 percent. Complicating matters, however, states such as Georgia have a heavier concentration of low-wage manufacturing, and the like, which suggests that the impact could be higher in southern states. If this is true, just what are the characteristics of minimum wage workers, especially in Georgia?

Only fragmented descriptions of minimum wage earners (here referred to as "minimum wagers") in general have been published. Even fewer statistics have been generated to show the profile of Georgia workers who probably would be affected. This article profiles the number of Georgians who currently are paid at or below $3.35 per hour, workers earning between $3.36 and $3.85, and those making between $3.85 and $4.25, the maximum which President Bush indicated that he will approve (a position leading to his recent veto of minimum wage increases passed by the U. S. Congress).

DATA SOURCES ON MINIMUM WAGE RECIPIENTS

The Bureau of Labor Statistics (BLS) and the U. S. Department of Labor publish several different data series on hourly earnings, most of which are derived from sample surveys of payrolls of business establishments subject to unemployment insurance laws. Average earnings and employment data for industries within states do not provide detailed information on the demographic and social characteristics of wage earners, nor are detailed personal characteristics generated in typical area wage surveys. For example, the BLS conducts wage and salary surveys in selected metropolitan areas; coverage is limited to jobs such as janitors, secretaries and carpenters employed by a wide range of industries, and to workers who are employed by large firms. These surveys find average pay for janitors, and others, stands well above the minimum; in most markets, some janitors are paid as much as three times the low-wage janitors in that market. Still, significant portions of several occupational classes are paid at the minimum wage.

Data derived from the Current Population Survey (CPS), however, help to answer several questions: Who are the workers working at or below the minium wage, or in just-above wage groupings? What jobs do they hold? What are their educational levels? Each monthly survey encompasses nearly 60,000 households which always are interviewed for labor force information; supplemental questions also are asked periodically (e.g., educational detail, or poverty status). Since 1985, the CPS has generated a sample representative of the nation as a whole as well as one representative of each state. The monthly data can be aggregated into annual averages to increase their statistical reliability. As the BLS points out, annual averages of unemployment and related characteristics derived from the interviews are reliable, although state-level estimates, being based on smaller subsamples, vary somewhat more.

Results generated from any sample survey can vary by chance from the findings which would result if the entire population were interviewed. For this study, pooling the data in some elements for 1986 and 1987 and for others 1986, 1987 and 1988, reduces the standard error of the estimates. But, as the BLS notes, even a complete population survey is not totally devoid of clerical processing errors or those resulting from

nonreporting or ommission.

A MODIFIED CPS VIEW OF MINIMUM WAGES

Selected questions often are used to limit the scope of minimum wagers in published statistics. Persons usually screened from the CPS sample are those identified by answers to these questions: "Is _____ paid by the hour on this job" and "how much does _____ earn per hour?" As BLS economist Earl Mellor notes, about half of the hourly-paid workers hold jobs where tips and commissions usually are also involved, but may not be reported; even so, only the reported amount is used in BLS's analysis.

On the other hand, the screened sample does *not* include workers who are paid salaries, or paid on a daily or piecework basis, although their weekly pay and usual hours of work are recorded, and can be used to calculate the hourly pay equivalent. The way people are are paid typically depends on their kind of job. In a 1984 review of hourly paid workers, BLS economists found that 80 percent of part-time workers are paid by the hour, but only 54 percent of full-time workers are paid by the hour. While 90 percent of teenagers and nearly 75 percent of persons aged 20 to 24 are paid on an hourly-rate basis, only about 50 percent of prime-age workers are paid by the hour. Among occupational groups, only half of private household workers are paid by the hour; less than 60 percent of clerical and administrative support workers, sales workers, and workers in farming, fishing and forestry jobs are paid on an hourly basis. Conversely, over 80 percent of factory blue-collar workers are paid on an hourly rate basis. Over two-thirds of all blacks and Hispanics, as compared with 58 percent of whites are paid by the hour. For prime-age workers, about 45 percent of males and nearly 60 percent of females are paid by the hour.

Consequently, when a screening question removes salaried and other non-hourly paid workers from the group to be evaluated, potentially biased interpretations of minimum wage incidence and impacts are possible. For example, exclusion of salaried/per day workers screens out significant numbers of maids, clerical workers, and farm laborers, among others. This prompts the critical question: are usable data available for non-hourly paid workers? Mellor notes that because precise joint answers are required, only *crude* estimates of their hourly rates can be calculated. Even if crude, the calculations are warranted because over 40 percent of all workers, and significant proportions of selected categories are not paid on an hourly basis. Note too that joint answers in the CPS are considered reliable for calculating poverty and unemployment rates, among other things.

A LARGER TOTAL FOR CPS DATA

This article considers both hourly paid and salaried/plus workers. After a brief summary of the national profile, it examines workers in Georgia who were interviewed in the CPS survey, and expands the sample population (based on roughly 22,600 households in Georgia) to full population estimates. In addition to describing minimum wage proportions for selected categories, this study also reviews poverty proportions. Since 1981, the minimum wage of $3.35 per hour has remained constant, even though average pay levels have been increasing, and despite inflation which pushed the statutory wage to its lowest real-wage level since 1955. In real terms, the minimum wage has fallen by about 30 percent since 1981. The minimum now equals less than 40 percent of the average pay in private industry, although Congress traditionally has used 50 percent of private pay as its yardstick for fixing the minimum. Full-time, year-around workers at the minimum wage earn less than $7,000 per year, less than the poverty threshold for families of three; their earnings fall even farther short if four or more persons are household members. A minimum-wage earner with a family of four persons would have to work 60 hours every week during the year (assuming that he is drawing time-and-a-half rates for the 20 hours over the 40 hour per week standard) to earn enough to reach the poverty threshold.

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In short, we can use CPS data for workers not paid on a straight hourly basis, even if calculated rates are not absolutely as sound as data for hourly paid workers. Is there published evidence that inclusion of salaried workers data makes noticeable differences in profiles of the characteristics of minimum-wage recipients?

Testimony by Arthur Flemming on behalf of The Citizens Committee for a Just Minimum Wage, before the Senate Committee on Labor and Human Resources reported these relationships: nationally, two-thirds of minimum wage workers are over 20 years of age; over 225,000 are 65 years or older. Sixty percent of minimum wage workers are women. In 1986, 7 million workers were paid at or below the minimum wage of $3.35. Other researchers found essentially the same profile.

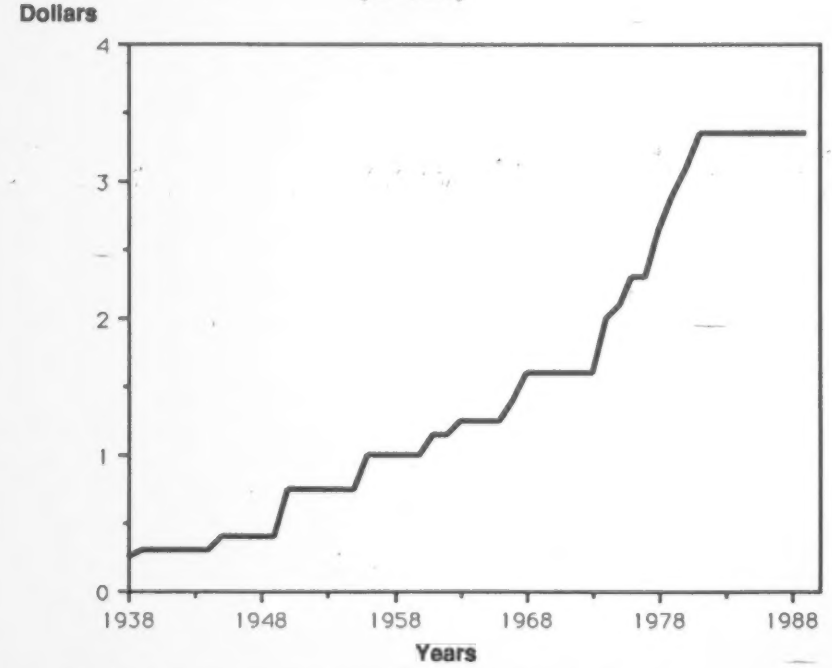
CHARACTERISTICS OF MINIMUM WAGE WORKERS

In 1986, including salary/per-day workers, based on only those cases where both weekly earnings and usual hours of work are reported, would add another 1.7 million workers to the BLS estimate of 5.1 million hourly-paid workers. Over 70 percent of the per-day and salaried minimum wage workers were adults 25 years old and older, in sharp contrast with the hourly-paid sector in which adults constituted about 40 percent of the low-wagers (alternatively, 60 percent of the hourly-paid total are those aged 16 to 24). Data for 1987 and 1988 show the same general dimensions for the non-hourly paid group.

The BLS has made available unpublished CPS data for 1987 and 1988. Because the 1986 data are the most recent published data, this study also compares hourly-paid and the salaried-plus workers in 1986 with profiles for the combined sample that highlight the inclusion of all minimum wagers, regardless of how they are paid. The estimate, which shows one-third more minimum wagers using data for salaried persons, understates the actual number of salaried minimum wagers by at least 100,000 workers because of missing responses either for weekly earnings or for the number of hours of work. The chart highlights the change which occurs in the age distribution when based on data from all employees. Table 1 illustrates the additional impact made when both salaried and hourly-paid workers are grouped by sex.

The pooling of both salaried and hourly-paid workers for both 1986 and 1987, to increase the subsample sizes, shows that 53 percent of minimum wagers are concentrated in sales and food service, but farm workers, private household workers, clerical personnel, handlers/laborers, and factory operatives add an additional 35 percent. Over 55 percent of private household workers and more than 20 percent of all agricultural workers are paid at or below the minimum wage. Note that not all of the underpaid workers are covered by the minimum wage law. Noncoverage is a condition which applied not only for those employed in small retail and service firms, but also to workers in seasonal amusement centers, in outside sales occupations, and others. An undetermined portion of those covered

U.S. Minimum Wage Levels, 1938-1989 (dollars)



Source: U.S. Department of Labor, Bureau of Labor Statistics.

Table 1

Hourly-Paid and Salaried Workers at or Below the Minimum Wage, 1986

Sex & Age	Hourly Paid		Salaried		Total		% of Each Group At or Below Min. Wage		
	Number	% of Group	Number	% of Group	Number	% of Group	Hourly	Sal'd	Total
Total									
16 & up	5,060	100.0	1,686	100.0	6,746	100.0	8.8	4.5	7.1
16 - 24	3,005	59.4	490	29.1	3,495	51.8	19.2	12.2	36.2
16 - 19	1,848	36.5	217	12.9	2,065	30.6	32.3	36.4	32.7
25 & up	2,054	40.6	1,196	70.9	3,250	48.2	4.9	3.4	4.2
Men									
16 & up	1,744	34.5	719	42.6	2,463	36.5	5.9	3.2	4.7
16 - 24	1,229	24.3	254	15.1	1,473	21.8	15.1	12.8	14.5
16 - 19	792	15.7	121	7.2	913	13.5	27.5	36.1	28.4
25 & up	514	10.2	465	27.6	979	14.5	2.4	2.3	2.3
Women									
16 & up	3,317	65.6	967	57.4	4,284	63.5	11.9	5.7	9.5
16 - 24	1,776	35.1	236	14.0	2,012	29.8	23.7	11.7	21.2
16 - 19	1,056	20.9	96	5.7	1,152	17.1	37.1	36.8	37.1
25 & up	1,541	30.5	731	43.4	2,272	33.7	7.6	4.9	6.4

also receive less than minimum wage pay because of employers' noncompliance.

Georgia appears likely to have a significant share of minimum wagers, given national statistics showing that 43 percent of all U.S. minimum wage recipients live in the South, blacks have a higher incidence than whites, school dropouts are twice as likely as high school graduates, and women who are not married or who do not have a spouse present are six times more likely than male counterparts to be minimum wage recipients.

THE ECONOMIC IMPACT OF HIGHER MINIMUMS

When salaried and other recipients at or below the minimum wage are included with the hourly-paid minimum wagers, the total has ranged from about 6 to 7 million workers in recent years. Over 40 percent of the combined categories worked full-time work weeks. Even so, poverty proportions for families with one member paid at or below the minimum wage run above 30 percent.

Most of the debate over economic impact focuses on the question of whether the minimum wage change would contribute to the well-being of the target population. Opponents state that minimum wage changes will lead to a cutback in employment, since firms can only maximize profit by reducing numbers employed at the higher wage level. Persons squeezed out may become unemployed, or be forced into noncovered employment where their additional numbers would force pay even lower. A few studies have concluded that managements might adjust to higher minimum wages by cutting out fringe benefits which normally would be provided, so on balance, recipients would lose.

Over the years, researchers generally have agreed that minimum wage impact centers principally on teenagers' employment, and that time series data are preferred for assessing the impact of past changes in the minimum wage. As researcher Finis Welch estimated, a 10 percent increase in the minimum wage cuts teenagers' employment by 1 to 3 percent, reducing jobs which would have existed at the lower wage. Others have argued that a professional concensus exists that minimum wage changes induce moderate declines in teenagers' employment, but not necessarily increased unemployment because the displacement may show up as reduced labor force participation.

One particularly widely cited study reviewed the employment impact for minimum wage changes over the period from the first quarter 1954 through the fourth quarter 1979, and estimated that a 10 percent minimum wage increase would reduce teenagers' employment from .5 to 1.5 percent. Because the number of teenagers dropped significantly in the early

continued on page 12

MINIMUM WAGES: CURRENT VIEWS

Debate over recently proposed changes in the Federal minimum wage mostly has focused on estimated employment losses. Testimony before the Senate Committee on Labor and Human Resources addressed several questions: How many job opportunities will be lost? Will the proposed increases really ameliorate poverty? Will there be higher costs to the workers and consumers?

Cutbacks in employment opportunities are estimated to affect about 200,000 persons, half of whom would remain unemployed, with the rest moving out of the labor force. These projections were made by Gerard Adams, who used the University of Pennsylvania's macroeconomic model to simulate the impact of the proposed changes in the minimum wage. Adams found that the entire package of proposed changes would add less than one-tenth of a percent to the unemployment rate (in part because the number of teenagers is smaller now that the baby boom has passed), and noted that the proposed increase would add only two-tenths of a percent per year to the inflation rate. Adams stressed that labor markets are highly fragmented, meaning that wages are fixed in individual relationships so that workers who lack information, mobility, and bargaining power are unable to achieve a market wage, a condition which theoretical studies assume will be achieved. He suggests that close to 10 million workers are paid at or below the minimum wage.

Former Secretary of Labor William Brock commented that historical studies have found that a 10 percent increase in the minimum wage leads to a loss of from 1 to 3 percent in job opportunities, mostly for the high-impact category, teenagers; applied to the current labor force, cutbacks for each 10 percent change would run about 100,000 to 200,000. Brock argued that the *cumulative* effect of the three-step increase would cause a cutback of about 800,000 workers. He noted that studies generally had not shown any probable inflation impact; but that there was likely to be an adverse impact on poverty.

Finis Welch, a widely-cited researcher on minimum wage impact, essentially agreed with Brock. He noted that empirical studies have found a very weak relationship between the minimum wage and numbers of unemployed persons in part because the enumeration of unemployed persons is very tricky. Mimimum wages are more strongly related to employment, although the minimum wage is not the only factor involved in the level of employment. Welch concluded that the proposed increase (the three steps cumulating from 30 to 40 percent) could cause a cutback of from 10 to 12 percent in youth employment.

Table 2

The Distribution of U.S. Minimum Wagers by Occupation, 1986-87

Occupational Class	Paid Hourly	Salaried	Percent of Class Paid Min. Wage	Class as % of Min. Wagers
Exec. and Admin.	23,057	100,560	1.2	1.9
Professional	85,587	152,320	1.9	3.7
Technicians	22,219	13,300	1.1	0.5
Sales	722,933	187,996	8.5	14.0
Adm. Support Clerical	402,912	134,982	3.1	8.3
Priv. Household	246,901	264,964	55.5	7.8
Protection Services	74,582	11,079	4.6	1.3
Other Services	2,238,770	292,700	23.1	38.8
Crafts Repair	113,653	71,163	1.6	2.8
Operatives	299,886	87,457	4.9	5.9
Transportation	151,589	47,076	3.3	2.1
Handlers, Laborers	380,681	90,332	10.2	7.5
Farm, Fish., For.	176,105	192,492	21.1	5.7

Georgia's Changing Labor Force: The Expansion of the 1980's

Suzanne A. Lindsay

Since the back-to-back recessions of 1980-1982, Georgia's economy has shared in six years of recovery and expansion. Data from the U.S. Bureau of the Census' *Current Population Survey*, a nationwide sample survey that currently includes about 59,500 households, show that from 1983 through 1988, the size and characteristics of the state's civilian labor force changed substantially. The labor force and employment expanded, unemployment and the statewide unemployment rate fell, and both the demographic and industrial distribution of employment altered. The following discussion, based on annual averages of monthly survey data for 1983 and 1988, outlines some of the most significant changes. Because the data are sample-based, however, changes should be considered indicative of general trends, rather than precise differences. Sampling errors applying to state estimates at various confidence levels are included in the U.S. Bureau of Labor Statistics reports (*Geographic Profile of Employment and Unemployment, 1983* and *1988*, forthcoming) based on the survey.

Between 1983 and 1988, Georgia's civilian noninstitutional population grew by over 12 percent, but its civilian labor force grew even faster, expanding by more than 18 percent (Table 1). By 1988, 68 percent of the civilian noninstitutional population was in the labor force, an increase of over 3 percent in six years. Although the number of women in the population grew slightly faster than that of men (13 percent versus 12.2 percent), the percentage increase of women in the labor force was almost twice as large (24.4 percent) as that for men (13.5 percent). In 1988, men in the labor force made up 77.7 percent of male civilian noninstitutional population. The participation rate for women was still much lower, at 59.7 percent, but reflected a much higher rate of increase over the period (5.5 percentage points versus 0.9 percentage points for men). The number of teenagers aged 16-19 in the population dropped by 4.7 percent and, in the civilian labor force, by 3.5 percent. Teenagers' labor force participation rate (those in the civilian labor force as a percentage of the civilian noninstitutional population for that age) stood at 52.3, up only slightly from 1983.

Georgia's black population and labor force grew much faster (34.2 percent and 38.8 percent, respectively) than its white population and working force, which increased by 5.2 percent and 11.5 percent, respectively. Civilian labor force increases for black women were very high, up 48.9 percent from 1983 to 1988; those for black men, although nearly 30 percent above 1983 levels, were only slightly higher than the group's population growth. Population and labor force changes for teenagers by race cannot be compared for the period, since 1983 data for black teenagers are not available. The population of white teenagers aged 16-19 dropped by over 17.6 percent, however, slightly more than the drop in the civilian labor force for the same group. In general, labor force participation rates for blacks remained lower than those for whites, especially for working-age teenagers in 1988, and their percentage point increases from 1983 were lower.

Perhaps reflecting the movement of the last members of the "baby boom" generation out of schools and into an expanding economy, the civilian noninstitutional population of single (never married) persons grew by 19.6 percent, but its labor force members grew by over 27 percent, with a labor force participation rate of 70.8 percent. The population of married persons with spouses present at the time of survey grew at less than half that rate (7.3 percent) and had lower labor force increases (12.5 percent), but had a participation rate of 71.8 percent. Persons of "other marital status" (those divorced, widowed, separated, or married with spouse absent) had the highest increases in civilian noninstitutional population (20.6 percent) and civilian labor force (28 percent), but the lowest labor force participation (54.5 percent) and percentage point change in the labor force participation rate. Data by age and sex

Table 1

Demographic Characteristics of Georgia's Civilian Noninstitutional Population and Labor Force, 1988, and Change for 1983
(Annual averages in thousands)

Population Group	Civilian Noninstitutional Population	% Change from 1983	Civilian Labor Force	% Change from 1983	Civilian Labor Force as % of Population	% Point Change from 1983
Total	4,693	12.6	3,192	18.4	68.0	3.3
Men	2,179	12.2	1,692	13.5	77.7	0.9
Women	2,514	13.0	1,500	24.4	59.7	5.5
Both sexes, 16-19 years	366	-4.7	191	-3.5	52.3	0.7
White	3,288	5.2	2,280	11.5	69.3	3.9
Men	1,558	6.4	1,243	8.2	79.8	1.3
Women	1,730	4.1	1,037	15.7	59.9	6.0
Both sexes, 16-19 years	215	-17.6	122	-17.0	57.0	0.7
Black	1,372	34.2	890	38.8	64.9	2.2
Men	605	29.0	436	29.8	72.1	0.5
Women	767	38.7	454	48.9	59.2	4.1
Both sexes, 16-19 years	149	NA	67	NA	45.0	NA
Single (never married)	1,128	19.6	799	27.6	70.8	4.4
Married, spouse present	2,600	7.3	1,867	12.5	71.8	3.4
Other marital status*	965	20.6	526	28.0	54.5	3.1

* Includes divorced, widowed, separated, and married with spouse absent.

Note: NA indicates data not available. Items may not add to totals or compute to displayed percentages because of rounding. Detail for race will not add to totals because data for the other races group are not presented.

Source: U.S. Bureau of Labor Statistics, Geographic Profile of Employment and Unemployment, 1983 (Bulletin 2216, October, 1984), Table 12; and advance data from Geographic Profile of Employment and Unemployment, 1988, Table 12.

that might pinpoint such differences more precisely are not available. The changes reflect not only the prevalence of change in marital status, but also the possibility that the labor force participation of the "other" group may be limited by age and/or family responsibilities.

DEMOGRAPHICS OF EMPLOYMENT AND UNEMPLOYMENT

The civilian labor force includes both employed and unemployed persons. Table 2 summarizes demographic changes in the two labor force components between 1983 and 1988. Georgia's total employment of just over three million in 1988 was 20.5 percent above its 1983 level; unemployment dropped by 8.4 percent in the same period. The 185,000 unemployed made up 5.8 percent of the civilian labor force in 1988, a rate 1.7 percentage points lower than the annual average for 1983. The employment of women increased by almost 27 percent, 11 percentage points more than that for men, but unemployment fell less for women. Their 6.5 percent unemployment rate in 1988 was over 1 percent higher than that of males, although both rates fell by the same 1.7 percentage points (1.7) from 1983. In contrast, the number of employed and unemployed teenagers aged 16-19 each fell, reflecting the decline in their civilian noninstitutional population. Unemployment declined relatively more than employment, but the unemployment *rate* of this group remained much higher in 1988 (18.5 percent) than those for the civilian labor force as a whole or for either sex, and was essentially unchanged from 1983.

Employment of blacks increased much more rapidly than that of whites (43.2 percent versus 13.6 percent), with the number of employed black men rising just over 37 percent and of employed black women, 50 percent. Although unemployment rates fell for blacks as a whole and for each sex, the *number* of unemployed rose for the group as a whole and for

Table 2

Employment, Unemployment, and Unemployment Rate of Georgia's Civilian Labor Force, 1988 with Changes from 1983
(Annual averages in thousands)

Population Group	Employment	% Change from 1983	Unemployment	% Change from 1983	Unemployment Rate	% Point Difference from 1983
Total	3,007	20.5	185	-8.4	5.8	-1.7
Men	1,603	15.5	89	-12.7	5.2	-1.7
Women	1,403	26.9	97	-2.0	6.5	-1.7
Both sexes, 16-19 years	156	-3.1	35	-5.4	18.5	-0.2
White	2,200	13.6	80	-25.9	3.5	-1.8
Men	1,199	9.3	44	-15.4	3.5	-1.0
Women	1,001	19.2	36	-35.7	3.4	-2.8
Both sexes, 16-19 years	109	-15.5	13	-27.8	10.9	-1.5
Black	785	43.2	105	12.9	11.8	-2.7
Men	392	37.1	44	-12.0	10.1	-4.8
Women	393	50.0	61	41.9	13.5	-0.6
Both sexes, 16-19 years	45	NA	22	NA	32.7	NA
Single (never married)	717	31.3	82	2.5	10.3	-2.5
Married, spouse present	1,805	14.4	63	-21.3	3.4	-1.4
Other marital status*	485	31.1	40	-2.4	7.7	-2.3

* Includes divorced, widowed, separated, and married with spouse absent.

Note: NA indicates data not available. Items may not add to totals or compute to displayed percentages because of rounding. Detail for race will not add to totals because data for the other races group are not presented.

Source: U.S. Bureau of Labor Statistics, Geographic Profile of Employment and Unemployment, 1983 (Bulletin 2216, October, 1984), Table 12; and advance data from Geographic Profile of Employment and Unemployment, 1988, Table 12.

black women. Black women, however, registered the largest percentage point decline (-4.8 points) in an unemployment rate.

By marital status, employment of single and "other marital status" individuals each rose by just over 31 percent, with married persons' employment increasing at about half that level (14.4 percent). The number of unemployed fell by over 21 percent for married persons, declined by 2.4 percent for the "other" group, but rose by 2.5 percent for single persons. Single persons, a group including many teenagers, had both the highest unemployment rate in 1988 (10.3 percent) and the greatest decline in that rate since 1983 (2.5 percentage points). Unemployment rates for married persons, and those for white women, were the lowest (3.4 percent) reported.

EMPLOYMENT BY OCCUPATION

Beginning with 1983 data, the occupational classifications reported from the CPS surveys match the categories employed in the 1980 Census of Population, but differ from those used in CPS reports published for the early 1980s. Data for 1988 show that Georgia's *experienced* civilian labor force (meaning that persons without previous work experience are not counted in the labor force, even though they may be available and looking for work) grew by 18.8 percent from 1983 (Table 3), with employment increasing by 20.5 percent and overall unemployment falling by 6.9 percent. The two fastest growing occupations were executive, administrative, and managerial employment, with a 44.2 percent increase, and technicians and related support employment, which grew by 40.6 percent. Increases in employment in other categories ranged from a low of 3.1 percent for machine operators, inspectors, and fabricators, to growth of over 20 percent each for sales, administrative support (including clerical workers), service occupations in general, and precision, production, craft, and repair employment. Only farming, forestry, and fishing occupations showed a loss in employment, with a decline of 25.3 percent from 1983 employment averages.

Unemployment, normally very low for the executive,

Table 3

Employment Status of Georgia's Experienced Labor Force in 1988,
By Occupation, with Percentage Change from 1983
(Annual averages in thousands)

Occupation	Civilian Labor Force	% Change from 1983	Employed	% Change from 1983
Total Employment	3,167	18.8	3,007	20.5
Managerial and professional specialty				
Executive, administrative, and managerial	383	46.2	372	44.2
Professional specialty	323	17.5	319	18.2
Technical, sales, and administrative support				
Technicians and related support	91	37.9	90	40.6
Sales	394	23.9	371	23.7
Administrative support, including clerical	488	19.3	474	22.2
Service occupations	419	18.0	385	21.5
Precision, production, craft, and repair	391	21.1	377	24.8
Operators, fabricators, and laborers				
Machine operators, inspectors, and fabricators	295	4.6	266	3.1
Transportation and material moving	148	13.0	142	17.4
Handlers, equipment cleaners, helpers, and laborers	170	7.6	152	10.1
Farming, forestry, and fishing	61	-28.2	59	-25.3

Occupation	Unemployed	% Change from 1983	Unemployment Rate	% Change from 1983
Total Employment	161	-6.9	5.1	-1.4
Managerial and professional specialty				
Executive, administrative, and managerial	11	175.0	3.0	1.3
Professional specialty	5	0.0	1.4	-0.6
Technical, sales, and administrative support				
Technicians and related support	1	-50.0	1.5	-2.1
Sales	23	27.8	5.7	-0.1
Administrative support, including clerical	15	-28.6	3.0	-2.1
Service occupations	34	-10.5	8.2	-2.4
Precision, production, craft, and repair	15	-28.6	3.8	-2.7
Operators, fabricators, and laborers				
Machine operators, inspectors, and fabricators	29	20.8	9.9	1.5
Transportation and material moving	6	-40.0	3.8	-4.1
Handlers, equipment cleaners, helpers, and laborers	18	-10.0	10.7	-2.2
Farming, forestry, and fishing	2	-66.7	3.9	-3.1

Note: Items may not add to totals or compute to displayed percentages because of rounding. Detail for race will not add to totals because data for the other races group are not presented. The experienced labor force excludes persons with no previous work experience.

Source: U.S. Bureau of Labor Statistics, Geographic Profile of Employment and Unemployment, 1983 (Bulletin 2216, October, 1984), Table I4; advance data from Geographic Profile of Employment and Unemployment, 1988, Table 14.

administrative, and managerial groups, increased substantially. At 3 percent, however, the group's unemployment rate remained well below the overall rate of 5.1 percent, although 1.3 percentage points higher than in 1983. The number of unemployed increased for sales occupations and for machine operators, inspectors, and fabricators, and remained the same for persons in professional specialties. Every other occupational category showed a decline in the number unemployed, with corresponding declines in unemployment rates in most cases. In general, less skilled occupations had the highest unemployment rates.

A percentage distribution of civilian employment in 1988 by occupation and demographic group shows that managerial, technical, and service occupations provided 67 percent of overall employment (Table 4). Proportionately more men than women held executive, administrative, and managerial jobs, although the proportion of specialized professional jobs was somewhat higher among women. Women's employment concentrated heavily in sales (13.2 percent), administrative support (26.9 percent) and service occupations (17.2) percent. By race, relatively large numbers of white civilians were employed in managerial, technical, and service occupations, and relatively few as operators, fabricators, and laborers and in farming, forestry, and fishing. Black civilian employment was highest in administrative support (13.3 percent), service occupations (23.4 percent), and as machine operators, inspectors, and fabricators (15.4 percent).

LABOR FORCE BY INDUSTRY

Classification of labor force data by industry shows that in 1988, manufacturing, trade, and services dominated, with government not far behind (Table 5). The numerically smallest but fastest growing industry, construction, expanded its labor force by 35.5 percent between 1983 and 1988, almost twice the growth of the total labor force. Finance, insurance, and real estate also grew very rapidly, with labor force expansion of almost 34 percent. The government sector's labor force grew least, expanding only 6.7 percent, but had almost the

Table 4

Percentage Distribution of Georgia's Employed Civilians, by Occupations and Demographic Group, 1988 Annual Averages
(in thousands)

Occupation	Population Group				
	Total	Men	Women	White	Black
Total Employed					
Number (thousands)	3,007	1,603	1,403	2,200	785
Percent	100.0	100.0	100.0	100.0	100.0
Managerial and professional specialty					
Executive, administrative, and managerial	12.4	13.9	10.6	14.8	5.9
Professional specialty	10.6	9.2	12.2	12.4	5.8
Technical, sales, and administrative support					
Technicians and related support	3.0	3.1	2.9	3.2	2.4
Sales	12.4	11.6	13.2	14.3	6.4
Administrative support, including clerical	15.8	6.0	26.9	16.8	13.3
Service occupations	12.8	9.0	17.2	9.0	23.4
Precision, production, craft, and repair	12.5	21.0	2.8	13.6	9.4
Operators, fabricators, and laborers					
Machine operators, inspectors, and fabricators	8.8	7.6	10.3	6.4	15.4
Transportation and material moving	4.7	8.0	1.0	4.2	6.3
Handlers, equipment cleaners, helpers, and laborers	5.1	7.7	2.0	3.5	9.2
Farming, forestry, and fishing	2.0	3.0	0.7	1.8	2.5

Note: Items may not add to totals or compute to displayed percentages because of rounding. Detail for race will not add to totals because data for the other races group are not presented.

Source: U.S. Bureau of Labor Statistics, Geographic Profile of Employment and Unemployment, 1983 (Bulletin 2216, October, 1984), Table I7; advance data from Geographic Profile of Employment and Unemployment, 1988,

Table 5

Georgia's Experienced Civilian Labor Force, 1988,
by Industry, with Unemployment Rates and Changes for 1983
(Annual averages in thousands)

Industry	Civilian Labor Force	% Change from 1983	Unemployment Rate	Percentage Point Change from 1983
Total[a]	3,167	18.8	5.1	-1.4
Nonagricultural industries				
Total[b]	3,076	20.3	5.0	-1.5
Private nonagricultural wage and salary workers				
Total[c]	2,420	23.0	5.6	-1.8
Construction	187	35.5	6.4	-5.1
Manufacturing				
Total	660	17.2	7.0	-0.3
Durable goods	265	18.3	7.2	-0.2
Non-durable goods	396	16.5	6.9	-0.4
Transportation,communications,public utilities	213	13.9	2.7	-1.6
Trade	610	17.1	6.4	-2.8
Finance, insurance, real estate	194	33.8	3.9	0.5
Services[d]	554	26.7	4.6	-2.1
Government	460	6.7	2.8	-1.3

Note: Excludes persons with no previous work experience.

[a] Includes private household workers, self-employed and unpaid family workers, and mining.
[b] Includes self-employed and unpaid family workers and mining.
[c] Includes mining.
[d] Excludes private household workers.

Source: U.S. Bureau of Labor Statistics, Geographic Profile of Employment and Unemployment, 1983 (Bulletin 2216, October, 1984), Table 16; and advance data from Geographic Profile of Employment and Unemployment, 1988, Table 16.

lowest unemployment rate (2.8 percent). Unemployment rates fell for every industry except finance, insurance, and real estate, although the declines in manufacturing were very small. Transportation, communications, and public utilities registered the lowest rate, 2.7 percent.

Labor force data by industry illustrate again that recovery and growth during 1983-88 reached throughout Georgia's economy, affecting almost all demographic groups and occupations. Although the data differ in detail and methodology from estimates based on business establishment reports, they offer relatively current information for states. Combining monthly surveys into annual averages, the CPS data offer preliminary insights into demographic and occupational changes that otherwise would await the detailed studies of the 1990 Census of Population.

continued from page 5

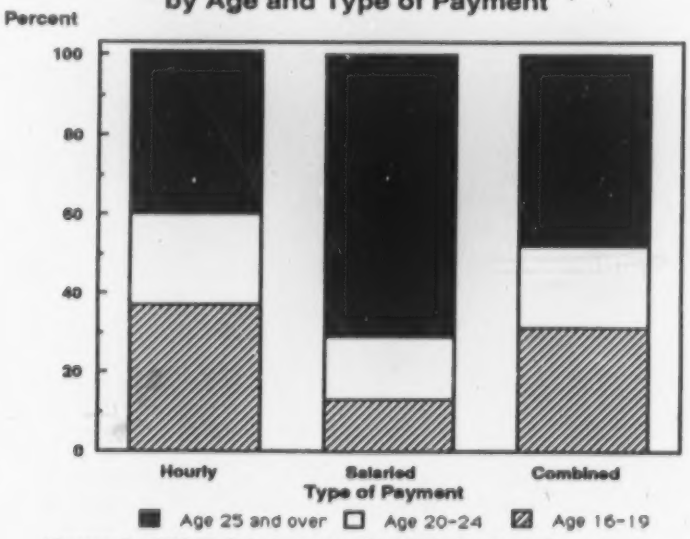
U.S. Minimum Wages, and Wages in Manufacturing, 1939-1987

Date of Change	Minimum Wage	Average Hourly Manufacturing Earnings	Minimum Wage as a Percent of Average Manufacturing Wages
October 1938	0.25	0.62	40.3
October 1939	0.30	0.63	47.6
October 1945	0.40	1.02	39.2
January 1950	0.75	1.44	52.1
March 1956	1.00	1.95	51.3
September 1961	1.15	2.32	49.6
September 1963	1.25	2.46	50.8
February 1967	1.40	2.82	49.6
February 1968	1.60	3.01	53.2
May 1974	2.00	4.42	45.2
January 1975	2.10	4.83	43.5
January 1976	2.30	5.22	44.1
January 1978	2.65	6.17	43.0
January 1979	2.90	6.70	43.3
January 1980	3.10	7.27	42.6
January 1981	3.35	7.99	41.9
January 1982**	3.35	8.49	39.5
January 1983	3.35	8.83	37.9
January 1984	3.35	9.19	36.4
January 1985	3.35	9.53	35.2
January 1986	3.35	9.73	34.4
January 1987	3.35	*9.81	34.2

* First Quarter 1987
** Minimum wage has remained unchanged since January 1981.

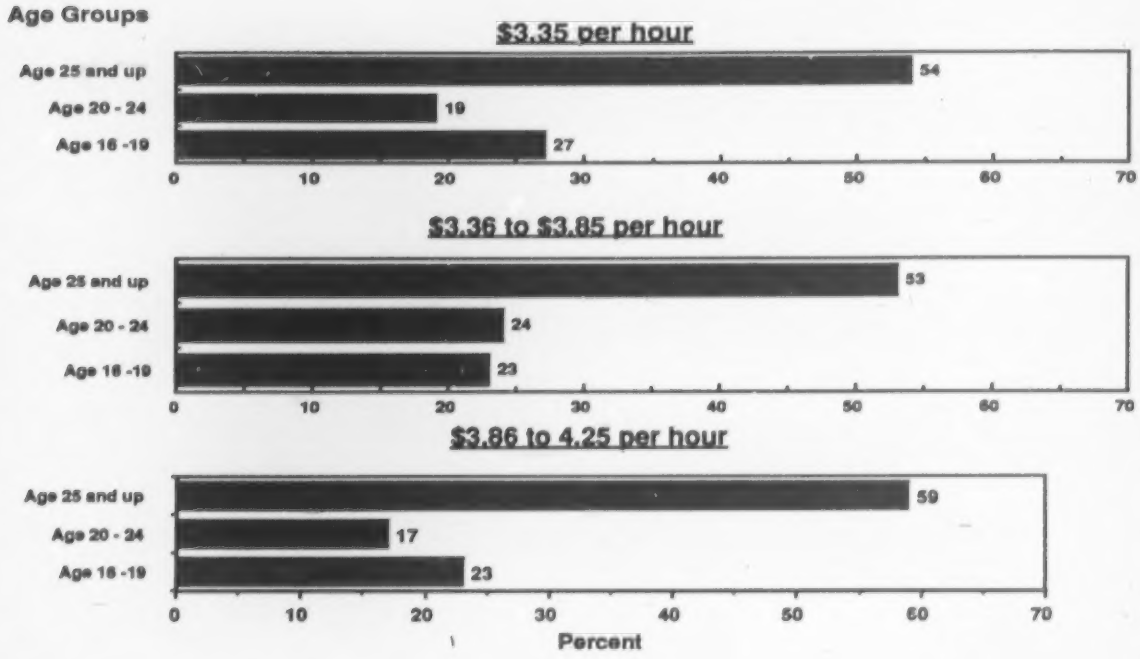
Source: U.S. Department of Labor, Bureau of Labor Statistics.

U.S. Minimum Wage Recipients*, by Age and Type of Payment



*Average for 1986-87. Data does not add to 100.0 due to rounding.
Source: U.S. Bureau of the Census, Current Population Survey.

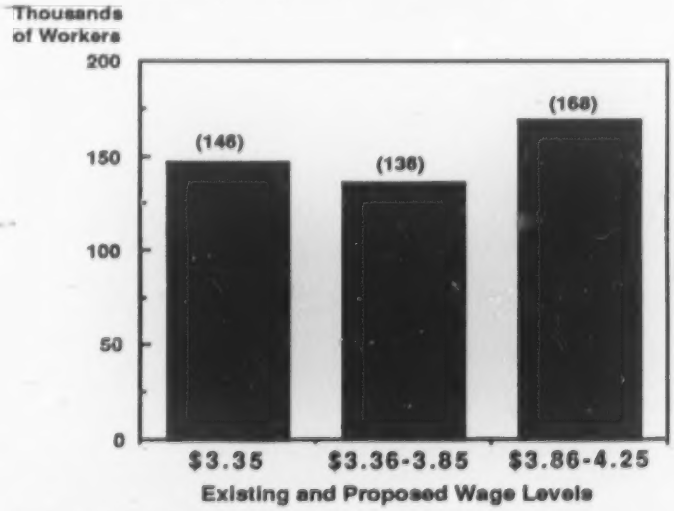
Age Distribution of Georgia Workers* Paid at Current and Proposed Minimum Wage Levels (percent)



*1987-88 average for workers paid by the hour and others.
Individual age groups may not add to 100.0 due to rounding.

Source: U.S. Bureau of the Census, Current Population Survey.

Number of Georgia Workers* in Minimum Wage Categories



*Average 1987-88, paid by hour and others.
Source: U.S. Department of Commerce, Current Population Survey.

1980s, a follow-up study found that CPS data did indicate that minimum wage changes reduced teenagers' employment, but not as convincingly, in part because of noncompliance.

Most economists seem to accept the finding that minimum wage changes will reduce teenagers' employment. A review of more than 20 studies concluded that, in general, minimum wage increases of 10 percent would lower employment, principally of youth, but only by 1 to 3 percent. Whether the employment impact is .5 to 1.5 or 1 to 3 percent, the findings indicate inelastic demand, which at the same time predicts that the income levels of those workers remaining employed would go up more than proportionately.

The most convincing testimony before the U. S. Senate was presented by Gerard Adams, a University of Pennsylvania economics professor, who used the Wharton School's econometric model to simulate the effects of the proposed change in the law. Adams reported that, nationally, unemployment would rise by only 0.1 percent (by about 100,000), in response to the proposed increase to $4.65 per hour by 1991. Opponents challenged the simulation results, using best guesses to buttress their arguments. Some of these guesses claim as many as 800,000 persons would lose their jobs if the minimum wage goes up to $4.65. In this writer's judgment, the Wharton School's simulation is the most reliable projection, especially since it takes into account market changes which will reflect the shrinkage in the number of persons aged 18 to 24 now that the baby boom has passed. If national effects indeed are relatively modest, the impact of proposed minimum wage changes on Georgia's workers may be less than feared.

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GEORGIA BUSINESS STATISTICS

SERIES	MAY 1989	APR 1989	MAR 1989	MAY 1988
Georgia Leading Indicators Index[1] (1969=100)	172.78	172.45	173.32	179.56
Georgia Coincident Indicators Index[2] (1969=100)	591.15	597.68	616.90	600.82
Nonagricultural Employment[2] (thousands)	2,934.2	2,925.9	2,925.8	2,865.8
Manufacturing Employment[2] (thousands)	567.0	562.5	563.7	575.4
Average Weekly Earnings, Manufacturing[2] (dollars)	353.57	354.90	354.84	357.16
Help Wanted Advertising, Atlanta Index[3] (1967=100)	226	248	232	289
Taxable Retail Sales[4] ($ millions)	3,969.6	3,105.3	4,058.2	4,102.4
Building Permits[5]				
Residential Housing Units, Private (thousands)	4.9	4.0	5.0	5.7
Value of Residential Housing ($ thousands)	293,080	263,252	304,311	346,810
Value of Nonresidential Construction ($ thousands)	184,146	166,599	224,867	188,282
Industrial Buildings	27,690	11,860	6,680	16,502
Office, Bank and Other Professional Buildings	20,830	24,880	18,508	23,966
Stores and Other Mercantile Buildings	48,032	27,125	46,769	61,007
Other	87,594	102,734	152,910	86,807
Consumer Price Index[6] (CPI-U, all items)				
South U.S. (1982-84 = 100)	121.3	120.8	119.8	115.6
South/Population more than 1,200,000[a]	122.0	121.4	120.5	116.7
South/Population 450,000 - 1,200,000[a]	122.4	122.2	121.0	116.2
South/Population 50,000 - 450,000[a]	120.0	119.4	118.5	114.6
South/Population Less than 50,000[a]	120.4	119.4	118.0	113.7
Atlanta (1982-84=100)[b]	–	–	121.7[c]	117.5[c]
Prices Received by Farmers, Georgia Index[7] (1977=100)	141	135[r]	137[r]	130
	1988:IV	**1988:III**	**1988:II**	**1987:IV**
Total Personal Income[8] ($ millions)	99,326	96,915	94,888	92,535

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[1] Georgia Economic Forecasting Project, Division of Research, College of Business Administration, University of Georgia. Initial monthly values subject to revision.

[2] Labor Information Systems, Georgia Department of Labor.

[3] Series published by The Conference Board, Inc.

[4] Derived by the Division of Research, College of Business Administration, University of Georgia, from data of the Sales and Use Tax System, Georgia Department of Revenue. Data for April and May, 1989 reflect computational changes because of the April, 1989 increase in the state sales tax rate.

[5] U.S. Department of Commerce, Bureau of the Census.

[6] U.S. Department of Labor, Bureau of Labor Statistics, Southeastern Regional Office.

[7] Georgia Department of Agriculture, Georgia Crop Reporting Service.

[8] U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System.

[a] Group size revised as of January 1, 1987; indexes revised to 1982-84=100 base as of January, 1988.

[b] Atlanta index is average of each 6 months of the calendar year; base revised to 1982-84=100 as of January 1, 1988.

[c] Data are for 2nd half, 1988, and 2nd half, 1987, respectively.

[d] Preliminary; more than 25% imputed.

[r] Revised.

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